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TABLE OF CONTENTS

	Page
BOSTON UNIVERSITY SCHOOL OF SOCIAL WORK	
List of Tables.....	ii
List of Figures.....	iv
Preface.....	v
Chapter I. Introduction to the Problem.....	1
INCIDENCE OF PSYCHOSES BY SOCIO-ECONOMIC AREAS Chapter II. IN THE CITY OF PROVIDENCE, RHODE ISLAND.....	10
Chapter III. Socio-economic 1938 TO 1948.....	12
Chapter IV. Description of the Psychoses.....	15
Chapter V. Distribution of the Psychoses by Socio- economic Neighborhood Areas in Providence.....	22
Chapter VI. Discussion A Thesis.....	92
Bibliography.....	100

Submitted by

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(B.S., RHODE ISLAND STATE COLLEGE, 1937)

In Partial Fulfillment of Requirements for
the Degree of Master of Science in Social Service

1949

School of Social Work

June 17, 1949

2464

TABLE OF CONTENTS

	PAGE
I. Providence Neighborhood Areas by Census Tracts.	23
List of Tables.....	ii
II. Providence Neighborhood Areas by Index Numbers.	39
List of Figures.....	iv
III. First Admissions to the Rhode Island State	
Preface.....	v
Chapter I. Introduction to the Problem.....	1
Chapter II. Review of the Literature.....	10
Chapter III. Socio-economic Division of Providence....	14
Chapter IV. Description of the Psychoses.....	42
V. First Admissions to the Rhode Island State	
Chapter V. Distribution of the Psychoses by Socio- economic Neighborhood Areas in Providence	62
Chapter VI. Discussion of Results.....	92
VI. First Admissions to the Rhode Island State	
Bibliography.....	100
VII. First Admissions to the Rhode Island State Hospital for Mental Diseases of Psychotics From Providence by Diagnoses and Neighborhood Areas, 1935-1948, Due to Disturbance of Circulation, and Psychoses Due to Disturbance of Metabolism, Growth, Secretion Or Endocrine Function.....	68
VIII. First Admissions to the Rhode Island State Hospital for Mental Diseases of Psychotics From Providence by Diagnoses and Neighborhood Areas, 1935-1948, Due to Convulsive Disorders, and Psychoses Due to New Growth.....	72
IX. First Admissions to the Rhode Island State Hospital for Mental Diseases of Psychotics From Providence by Diagnoses and Neighborhood Areas, 1935-1948, Due to Unknown or Hereditary Cause, and Undiagnosed Psychoses.....	78

TABLE OF CONTENTS

PAGE	
11	List of Tables.....
iv	List of Figures.....
v	Preface.....
i	Chapter I. Introduction to the Problem.....
10	Chapter II. Review of the Literature.....
14	Chapter III. Socio-economic Division of Providence.....
42	Chapter IV. Description of the Psychoses.....
	Chapter V. Distribution of the Psychoses by Socio-economic Neighborhood Areas in Providence
132	Chapter VI. Discussion of Results.....
100	Bibliography.....

LIST OF TABLES

TABLE	PAGE
I. Providence Neighborhood Areas by Census Tracts.	23
II. Providence Neighborhood Areas by Index Numbers.	39
III. First Admissions to the Rhode Island State Hospital for Mental Diseases of Psychotics from Providence by Diagnoses and Neighborhood Areas, 1938-1948, Associated with Old Age....	63
IV. First Admissions to the Rhode Island State Hospital for Mental Diseases of Psychotics from Providence by Diagnoses and Neighborhood Areas, 1938-1948, Due to Intoxication.....	65
V. First Admissions to the Rhode Island State Hospital for Mental Diseases of Psychotics from Providence by Diagnoses and Neighborhood Areas, 1938-1948, Due to, Or Associated with Infection.....	66
VI. First Admissions to the Rhode Island State Hospital for Mental Diseases of Psychotics from Providence by Diagnoses and Neighborhood Areas, 1938-1948, Due to a Drug Or Other Exogenous Poison, and Psychoses Due to Trauma	68
VII. First Admissions to the Rhode Island State Hospital for Mental Diseases of Psychotics from Providence by Diagnoses and Neighborhood Areas, 1938-1948, Due to Disturbance of Circulation, and Psychoses Due to Disturbance of Metabolism, Growth, Nutrition Or Endocrine Function.....	69
VIII. First Admissions to the Rhode Island State Hospital for Mental Diseases of Psychotics from Providence by Diagnoses and Neighborhood Areas, 1938-1948, Due to Convulsive Disorders, and Psychoses Due to New Growth.....	71
IX. First Admissions to the Rhode Island State Hospital for Mental Diseases of Psychotics from Providence by Diagnoses and Neighborhood Areas, 1938-1948, Due to Unknown or Hereditary Cause, and Undiagnosed Psychoses.....	72

LIST OF TABLES

PAGE	TABLE
23	I. Providence Neighborhood Areas by Census Tracts.
29	II. Providence Neighborhood Areas by Index Numbers.
63	III. First Admissions to the Rhode Island State Hospital for Mental Diseases of Psychotics from Providence by Diagnosis and Neighborhood Areas, 1938-1948, Associated with Old Age....
65	IV. First Admissions to the Rhode Island State Hospital for Mental Diseases of Psychotics from Providence by Diagnosis and Neighborhood Areas, 1938-1948, Due to Intoxication.....
65	V. First Admissions to the Rhode Island State Hospital for Mental Diseases of Psychotics from Providence by Diagnosis and Neighborhood Areas, 1938-1948, Due to, Or Associated with Infection.....
68	VI. First Admissions to the Rhode Island State Hospital for Mental Diseases of Psychotics from Providence by Diagnosis and Neighborhood Areas, 1938-1948, Due to a Drug Or Other Exogenous Poison, and Psychoses Due to Trauma
68	VII. First Admissions to the Rhode Island State Hospital for Mental Diseases of Psychotics from Providence by Diagnosis and Neighborhood Areas, 1938-1948, Due to Disturbance of Circulation, and Psychoses Due to Disturbance of Metabolism, Growth, Nutrition Or Endocrine Function.....
71	VIII. First Admissions to the Rhode Island State Hospital for Mental Diseases of Psychotics from Providence by Diagnosis and Neighborhood Areas, 1938-1948, Due to Convulsive Disorders, and Psychoses Due to New Growth.....
72	IX. First Admissions to the Rhode Island State Hospital for Mental Diseases of Psychotics from Providence by Diagnosis and Neighborhood Areas, 1938-1948, Due to Unknown Or Hereditary Cause, and Undiagnosed Psychoses.....

LIST OF TABLES (Continued)

TABLE	PAGE
X. First Admissions to the Rhode Island State Hospital for Mental Diseases of Psychotics from Providence by Diagnoses and Neighborhood Areas, 1938-1948, Disorders of Psychogenic Origin, Manic Depressive Psychoses.....	74
XI. First Admissions to the Rhode Island State Hospital for Mental Diseases of Psychotics from Providence by Diagnoses and Neighborhood Areas, 1938-1948, Disorders of Psychogenic Origin, Dementia Praecox (Schizophrenia).....	75
XII. First Admissions to the Rhode Island State Hospital for Mental Diseases of Psychotics from Providence by Diagnoses and Neighborhood Areas, 1938-1948, Disorders of Psychogenic Origin, Paranoia, Paranoid States, with Psychopathic Personality.....	76
XIII. Curve of Socio-economic Index Scores and Neighborhood Areas.....	78
IX. Index of Socio-economic Status by Neighborhood Areas in Providence, 1940.....	40
X. First Admissions of Psychotics Per 100,000 Population by Census Tracts.....	78
XI. Annual Rates of Psychoses in Providence Per 100,000 Population, 1938-1948.....	80
XII. Annual Rates of Organic Psychoses in Providence by Neighborhood Areas Per 100,000 Population, 1938-1948.....	83
XIII. Annual Manic Depressive Rates in Providence Per 100,000 Population, 1938-1948.....	85
XIV. Annual Schizophrenia Rates in Providence Per 100,000 Population, 1938-1948.....	87
XV. Annual Rates of Functional Psychoses in Providence by Neighborhood Areas Per 100,000 Population, 1938-1948.....	89

LIST OF TABLES (Continued)

TABLE	PAGE
X. First Admissions to the Rhode Island State Hospital for Mental Diseases of Psychotics from Providence by Diagnosis and Neighborhood Areas, 1938-1948, Disorders of Psychogenic Origin, Manic Depressive Psychoses.....	74
XI. First Admissions to the Rhode Island State Hospital for Mental Diseases of Psychotics from Providence by Diagnosis and Neighborhood Areas, 1938-1948, Disorders of Psychogenic Origin, Dementia Praecox (Schizophrenia).....	75
XII. First Admissions to the Rhode Island State Hospital for Mental Diseases of Psychotics from Providence by Diagnosis and Neighborhood Areas, 1938-1948, Disorders of Psychogenic Origin, Paranoia, Paranoid States, with Psychopathic Personality.....	76

LIST OF FIGURES

FIGURE	PAGE
I. Providence by Census Tracts.....	18
II. Providence Neighborhood Areas by Census Tracts...	23
III. Providence by Neighborhood Areas.....	24
IV. Percentage of Native Born Whites by Neighborhood Areas in Providence, 1940.....	26
V. Percentage of Owner-Occupied Homes by Neighborhood Areas in Providence, 1940.....	29
VI. Median Rents by Neighborhood Areas in Providence, 1940.....	32
VII. Median School Years Completed by Neighborhood Areas in Providence, 1940.....	33
VIII. Curve of Socio-economic Index Scores and Neighborhood Areas.....	38
IX. Index of Socio-economic Status by Neighborhood Areas in Providence, 1940.....	40
X. First Admissions of Psychotics Per 100,000 Population by Census Tracts.....	78
XI. Annual Rates of Psychoses in Providence Per 100,000 Population, 1938-1948.....	80
XII. Annual Rates of Organic Psychoses in Providence by Neighborhood Areas Per 100,000 Population, 1938-1948.....	83
XIII. Annual Manic Depressive Rates in Providence Per 100,000 Population, 1938-1948.....	85
XIV. Annual Schizophrenia Rates in Providence Per 100,000 Population, 1938-1948.....	87
XV. Annual Rates of Functional Psychoses in Providence by Neighborhood Areas Per 100,000 Population, 1938-1948.....	89

LIST OF FIGURES

FIGURE	PAGE
I. Providence by Census Tracts.....	18
II. Providence Neighborhood Areas by Census Tracts...	23
III. Providence by Neighborhood Areas.....	24
IV. Percentage of Native Born Whites by Neighborhood Areas in Providence, 1940.....	26
V. Percentage of German-Coupled Homes by Neighborhood Areas in Providence, 1940.....	28
VI. Median Rents by Neighborhood Areas in Providence, 1940.....	32
VII. Median School Years Completed by Neighborhood Areas in Providence, 1940.....	33
VIII. Curve of Socio-economic Index Scores and Neighborhood Areas.....	38
IX. Index of Socio-economic Status by Neighborhood Areas in Providence, 1940.....	40
X. First Admissions of Psychotics Per 100,000 Population by Census Tracts.....	78
XI. Annual Rates of Psychoses in Providence Per 100,000 Population, 1938-1948.....	80
XII. Annual Rates of Organic Psychoses in Providence by Neighborhood Areas Per 100,000 Population, 1938-1948.....	83
XIII. Annual Manic Depressive Rates in Providence Per 100,000 Population, 1938-1948.....	85
XIV. Annual Schizophrenia Rates in Providence Per 100,000 Population, 1938-1948.....	87
XV. Annual Rates of Functional Psychoses in Providence by Neighborhood Areas Per 100,000 Population, 1938-1948.....	88

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PREFACE

The type of work presented here was undertaken because of the author's feeling that more accurate, more scientifically tested information must be made available to the social worker. It has long been my feeling that it is not enough for the social worker to borrow liberally from other fields, but he must engage in social and psychiatric research of his own. In striking out independently it is hoped that social work may enhance its professional status and arm itself with tested criteria. Here I have attempted to analyze the problem of social environment and mental health. Perhaps this will help dispel some assumptions upon which social work has based its work which do not seem to stand up on critical examination. Perhaps it may aid in the use of that valuable tool, environmental manipulation.

The writer wishes to make some special acknowledgements at this time. The following have contributed materially to the completion of this thesis: Miss Tina Scolavino, statistician at the Rhode Island State Hospital, who made available graciously the records for this study when we must have sorely tried her time and patience; Mrs. Elizabeth K. Fletcher, whose patient use of the supervisory conference gave the writer a greater feeling of the problems faced by the mentally ill; Miss Mary Greenhalgh, who shortened im-

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CHAPTER I.

INTRODUCTION TO THE PROBLEM.

A study of this nature lies frankly in the borderline area among psychiatry, psychology, sociology and social work. Exactly which of these fields should initiate an investigation of the relationships between socio-economic areas and psychoses is difficult to determine. Probably a co-operative endeavor would yield the most satisfactory results.

The writer feels, however, that this type of work is the kind that will enable the social worker to apply a more scientific approach to the problems and understanding of the individual client than has heretofore been the case. Certainly, with the increased emphasis in the field of social work upon psychological phenomena, with the social worker's greater role in the operation of mental hygiene clinics and therapeutic situations, there is need for increased exact knowledge of the effects of environmental influences upon the mental and emotional characteristics of the individual. While this study deals with psychoses, it has long been known that psychotic behavior is merely an exaggeration of the normal, and the same emotional and behavior factors apply to a lesser degree.

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The purpose of this thesis is to ascertain whether certain types of socio-economic areas tend to produce psychoses,

and, if so, which types of areas these are. An attempt was also made to discover whether certain types of psychoses come from certain types of areas. For this purpose the City of Providence, Rhode Island, was used, and divided in such a manner as to combine homologous districts. The forty-nine districts into which the city was divided were then combined by identities to form nineteen individual neighborhood areas. The names applied to these are those commonly associated with these sections of the city. The methods used to form these combinations and their geographical positions in the city are discussed in Chapter III.

An attempt was made to review the sparse literature in this field, but the writer frankly feels that all approaches thus far made have been experimental in nature and inconclusive in results. For the most part the exploratory work has been done by sociologists or has gone beyond the confines of concentrated urban areas. Only a rather slow and un-intensive start has been made in this area of social medicine. Chapter II. will offer a brief survey of the existent literature available.

The next ingredient needed as an essential was a standardized system of diagnosis that could be universally applied. To provide this the 1942 edition of the Standard Classified Nomenclature of Disease as approved by the American Psychiatric Association was used. This is the form used as a statistical guide by the vast majority of mental

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hospitals in the United States, and it was the type of diagnosis used at the Rhode Island State Hospital for Mental Diseases, whose files were used for this study. In Chapter IV. a more detailed description of the various types of psychoses will be given. A word of caution is hereby given on the character of diagnoses in mental disorders. Essentially, the symptoms of mental disease are seldom as clear cut as those of the strictly somatic ailments. It is difficult to make a decision in all cases with which all physicians will agree. Initial tentative diagnoses are frequently revised in the light of further study and observation of behavior patterns. Even a casual glance at the records indicates that certain labels have popularity for a period and are then replaced by a new vogue, by a new school of thought, or by new diagnoses due to increased knowledge.¹ Anyone who has sat through a psychiatric diagnostic clinic will bear witness to the fact that seldom will all physicians sitting in the same room with the same patient, reading the same record and listening to the same interview, arrive at

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This, however, is the only information available today. The randomizing of the selections of cases by including all first admissions for ten years should tend to minimize the difficulties recognized in diagnosis. Since the same years were used for every area, there is a universality that make the results comparable and applicable.

To understand and appreciate the material used in this study, it is also necessary to be aware of the methods of admission to the state hospital. There are four methods of commitment. The most frequently used is the Department of Social Welfare Mittimus. In using this method, a relative, friend, or other interested person signs the committing papers and secures the signatures of two licensed physicians attesting to the condition of the patient. In the second method a court commitment is secured, again with the signatures of two qualified physicians. A third method is the voluntary commitment in which the patient surrenders himself

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to the custody of the hospital, signing an agreement not to leave without giving three days advance notice. The fourth method of commitment is a Defective Delinquent Commitment. Under an act passed on May 17, 1947, the court may send to the state hospital for a thirty day period of observation those persons brought before the court who are suspected of being mentally defective and habitually delinquent. At the writing of this thesis there had been only twenty-eight such admissions, and, therefore, this was not a serious factor in this study. One other method of admission is by transfer from other hospital, but the D.S.W. procedure is followed in these cases.

A great number of the mentally ill persons in the City of Providence first enter the Charles V. Chapin Hospital, the city hospital, where they usually remain for a period of about two weeks for observation. From here they may be transferred to the state hospital, to a private hospital or discharged. In this way some psychotics who are only mildly ill may return to their homes from the city hospital recovered, improved or unimproved. The seriously ill, however, are transferred for further hospitalization.

In addition to the state hospital, there is only one other hospital for mental diseases in the State of Rhode Island, Butler Hospital. This private hospital is not only too expensive for the great majority of patients, but is also restricted in the number it can care for. In the Butler

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Hospital One Hundred Fourth Annual Report for the year 1947, when this hospital had its peak year, there were seventy-six admissions of all types from the City of Providence. Using the normal percentage basis, this would mean thirty-one first admissions of psychotics which is what this study deals with. Of these, four were transferred to the state hospital, leaving only twenty-seven cases not accounted for in our records for the year. The transfers from Butler Hospital to the Rhode Island State Hospital for Mental Diseases indicate that the admissions to Butler are not concentrated in any one section of the city. Butler Hospital also prefers not to accept or keep those persons who are chronically ill. During the same period there were one hundred and seventy-eight first admissions of psychotics to the state hospital. The study by Robert E. L. Faris and H. Warren Dunham also indicates that inclusion of figures from private hospitals has little effect upon the whole picture and does not materially change the pattern of psychoses by areas.¹

The records of the Rhode Island State Hospital at Howard, Rhode Island, were used for this work. All admission cards for the period from January 1, 1938, to January 1, 1948, were examined. Of these, only those which were first admissions to this hospital were included in this survey. This avoided

1. Robert E. L. Faris and H. Warren Dunham, Mental Disorders in Urban Areas, pp. 28-37.

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In plotting addresses a degree of selection was used. The address from which each individual patient came was examined to discover which patients were residents of boarding homes, Salvation Army homes, protective institutions, The City Work Yard, etc. Those who were found to be temporary residents of such homes were traced to their last habitual abode and plotted from that place. Those who were found not to be bona fide residents of Providence were eliminated. Those who were transfers from other mental hospitals were treated as first admissions when this was the first admission to this particular hospital. The address used was that of their former non-institutional home.

The result of this selected sample was the use of 1885 cases for this thesis. Males made up 923 cases and the other 962 were females. This gives a mean average of 188.5 first psychotic admissions annually for the ten year period. While it appears that women contribute slightly more to the number of psychotics than men, it must be remembered that 52% of the population of Providence is female and 48% male. When corrected for population percentages we find that of every

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100 psychotics taken from an area where the male and female population is equal, 51 would be male and 49 would be female. The application of statistics indicates that this is not a significant difference, and we must regard males and females as contributing equally to the rates of psychosis.

In Statistical methods used in this thesis are those of normally accepted practice. At this point it would be wise to issue the oft-repeated warning that statistical treatment of data does not verify the data nor necessarily insure the writer's conclusions. While we would get an extremely high correlation if we compared the increase of household fuel consumption in the winter months in the United States with the number of ski-ing accidents in Switzerland during these same months, it would not prove that these accidents were due to this increase in the use of coal and oil. Something as ridiculous as this is frequently happening with the use of statistics.

In spite of the pitfalls involved in work of this nature, the writer has felt for some time that as scientific an approach as possible should be taken to the isolation of the various components that may contribute to mental illness. This is an effort to deal with some of the social factors involved. The multifarious elements involved, the multiplicity of symptoms, the virtual impossibility of organizing a control group and the complexity of the human personality - all argue against formulating black and white, cut and dried

answers to the causation of mental disorder in the form of general formulae. Yet the social worker must have an understanding of these elements in the social situation if he is to attempt the physical and social manipulation which has become one of his chief weapons. Perhaps continued research in these channels may enable him to use his resources with a greater degree of surety and thus prevent or at least allay the ever increasing numbers of mentally disturbed persons.

A review of the literature in this field is a part of what has not been written but what has been said in print. The purpose of this summary is to indicate the limitations within which such work must be carried on from the view point of prior investigation. This brief chapter sets forth the scanty scientific material available found by the writer, as the basis for continued study. In his introduction to New Facts on Mental Disorders as late as 1940, Dr. Dayton states:

It is the opinion of the writer that a study of mental disorders as a mass situation, as a comprehensive whole, as a broad sociological and administrative problem, has been one of the crying needs of psychiatry for some time...

In the past, the purely psychiatric and medical aspects of mental disease have been covered rather thoroughly in a literature devoted largely to the study of individual cases. Psychiatrists have had the habit of singling out and writing about the unusual patient. In fact, instances of an entire volume devoted to the study of a single case have not been uncommon. As a result of this literary devotion to the unusual, the bizarre, and the unique, the average patient has become the "forgotten man" of psychiatric literature.¹

In their preface to Mental Disorders in Urban Areas, Faris and Dunham note that "this is the first application

1. Hall A. Dayton, New Facts on Mental Disorders, p. ix.

answers to the causation of mental disorder in the form of general formulae. For the social worker must have an understanding of these elements in the social situation if he is to attempt the physical and social manipulation which has become one of his chief weapons. Perhaps continued research in these channels may enable him to use his resources with a greater degree of surety and thus prevent or at least allay the ever increasing numbers of mentally disturbed persons.

CHAPTER II.

REVIEW OF THE LITERATURE.

A review of the literature in this field is more a review of what has not been written than what has been set in print. The purpose of this summary is to indicate the limitations within which such work must be carried on from the view point of prior investigation. This brief chapter sets forth the scanty scientific material available found by the writer, as the basis for continued study. In his introduction to New Facts on Mental Disorders as late as 1940, Dr.

Dayton states:

It is the opinion of the writer that a study of mental disorders as a mass situation, as a comprehensive whole, as a broad sociological and administrative problem, has been one of the crying needs of psychiatry for some time...

In the past, the purely psychiatric and medical aspects of mental disease have been covered rather thoroughly in a literature devoted largely to the study of individual cases. Psychiatrists have had the habit of singling out and writing about the unusual patient. In fact, instances of an entire volume devoted to the study of a single case have not been uncommon. As a result of this literary devotion to the unusual, the bizarre, and the unique, the average patient has become the "forgotten man" of psychiatric literature.¹

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of a refined ecological technique to the problems of mental disorder."¹ This was in 1939.

Prior to the two studies mentioned above, much was assumed but little was known about the etiological background of insanity. Unsupported statements were made and conclusions drawn that had little or no basis in reality.

Civilization is often held to be a basic factor in mental disease. Freudians maintain that mental disorders are the price of the artificial restrictions and inhibitions which civilization imposes upon men and women. The complexity of modern culture, with the multiplicity of responses and adjustments which are required of the individual, inevitably means that some persons are unequal to the demands upon their physical strength and mental poise.²

The various types of insanity have a significant and interesting distribution over the city. The senile psychoses, the inherited diseases... show a noticeable lack of concentration. These diseases seem to be less affected by the social influences that ecological techniques uncover. Manic-depressive insanity shows considerable concentration in Jewish areas, where culture conflict is at its height and the marginal man broods in isolation. ...Schizophrenic cases are especially high in immigrant areas, particularly in those of first settlement. Culture shock apparently operates here with devastating results.³

These are the types of statements which appeared in the text-books before 1940, and, indeed, are still quite widely accepted as standard. They seem to show a lack of understanding of the complexity of the causative factors, a

1. Robert E. L. Faris and H. Warren Dunham, Mental Disorders in Urban Areas, p. xxi.

2. Mabel A. Elliot and Francis E. Merrill, Social Disorganization, p. 352.

3. *ibid.*, p. 592.

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2. Mabel A. Elliot and Etanella E. Warrill, Social Disorganization, p. 332.

3. *Ibid.*, p. 333.

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In 1940 Dr. Dayton published a study of 89,190 cases after twelve years work financed by the Rockefeller Foundation.¹ This book, dealing with the admission of patients to mental hospitals in Massachusetts between 1917-1933, treats socio-economic details. The emphasis, however, is upon economic conditions rather than economic areas. He deals with the factors of age, sex, nativity, alcohol and marital factors. The study indicates an increase in the rates of psychoses during a period of economic and social stress and strain, as during the early years of the depression and during the first year of prohibition. While interesting as background material, this volume is actually dealing with a different topic from ours and is not too comparable.

There is one book, however, that is roughly parallel in approach to the work of this thesis. That is the study by Dunham and Faris. In this work, published in 1939, these two sociologists have done much the same type of study with Chicago that is here attempted with Providence. In fact, this thesis owes some of its form to suggestions garnered from a reading of their book.

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They conclude that the pattern of rates in an urban area indicates that the type of social life and conditions in certain parts of a city tend to produce mental disorders. They found that while there was a very definite pattern to the location of schizophrenia in the city, there was no such evident distribution of the manic depressive psychoses. The schizophrenics were found to be allied in concentration with the ecological pattern of the city. The heaviest concentrations were in the socially disorganized sections of the city, with the heaviest incidence of psychosis in the central section of the city. They believe that areas that encourage isolation are naturally schizophrenic producing areas.

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While this review of the literature is obviously scanty, this is indicative of the lack of material in this field. As far as the writer knows, the task of examining the material concerning areas productive of mental disorders has scarcely been approached. There is no indication that there has been any such attack by either a social worker or a psychiatrist.

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CHAPTER III.

SOCIO-ECONOMIC DIVISION OF PROVIDENCE.

The City of Providence lies slightly north of the east-central portion of Rhode Island at the head of Narragansett Bay. It is one of the older cities in the United States, having been founded in 1636. The city was incorporated by an act passed on November 5, 1831, effective the first Monday of June, 1832. Portions of Cranston were re-annexed to Providence, June 10, 1868, March 28, 1873, and June 1, 1892. Part of North Providence was annexed March 28, 1873, and May 1, 1874. A section of the Town of Johnston was re-annexed June 1, 1898, and April 16, 1919. These territorial gains are important to understand since they explain the disproportionate increases in population more satisfactorily than do increased immigration quotas.

Originally, Providence was built on seven hills: College Hill, Constitution Hill, Tockwotton Hill, Smith Hill, Federal Hill, Christian Hill, the junction of Cranston and Westminster Streets, and Weybosset Hill. These hills, particularly College Hill, have an important bearing upon our study. The central business district found a natural environment for its purposes in the flatter sections at the base of the hills and close to the waterfront. Directly to the east of the business district, College Hill rises

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precipitously. Early in the development of the city this area was occupied by the wealthy financial and business families who wished to be out of the center of the city and yet close to their interests in the business district and along the waterfront. The establishment of Brown University in this neighborhood also served as a preventative for the migration of poorer elements into this section. The combination of the steep hill, the early settlement of the commercial interests and the site of Brown University gives Providence the relatively rare phenomenon of an exclusive residential district bordering on the heart of the industrial area. There has been a tendency in recent years for the wealthier to retreat somewhat from this Lower East Side to the East Side further to the east and northeast. This was probably forced by the limitations of land for the nouveau riche.

To the north and south, where this hill becomes more gradual in its ascent, industry has made its inroads and there is a sharp deterioration in the neighborhoods in the Camp and Fox Point neighborhoods. While these sections are almost equidistant from the Downtown area, they are in sharp contrast as to their social organization. The remainder of the city follows fairly regularly the normal population distribution of any large city with a fanning out from the central, deteriorated sections to the better, more suburban neighborhoods.

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At the time of the 1940 U. S. Census, the population of Providence was 253,504 in an area of 18.91 square miles. The city, however, serves a contiguous metropolitan area of over 500,000, many of whom work in Providence but live in the neighboring political sub-divisions. Principal industries are textile, rubber and jewelry.

Providence is a relatively stable city. At no time have there been any dramatic or upsetting population shifts or changes. From 1915 to 1940 the population increased only 5,844, from 247,660 to 253,504. This is an increase of only two per cent in an entire generation. Thus it becomes obvious that the stream of immigration was so gradual as to have little if any effect upon the stability of the population. The flow of foreign immigrants and southern Negroes found their way to other cities much more frequently than to Providence. For the entire city there are 77.2% native whites, 20.2% foreign born whites, and 2.6% non-whites. The segregation is not as sharp as in most other cities. Of the foreign born, the greater number come from Italy (17,010), Canada (5,668), Eire (5,659), England and Wales (4,785), and U. S. S. R. (4,260).¹

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The problem that presented itself in dealing with the heterogeneous elements that make up the city was that of separating and differentiating between the various types of population, and yet treat as a unit peoples of a homogeneous nature living in the same kind of neighborhood under the same general conditions. It was necessary to group identical peoples living under identical social conditions so that they might be treated as a unit. For this purpose United States census tracts of the City of Providence were used.

Census tracts are small areas, having a population usually between 3,000 and 6,000, into which certain large cities (and sometimes their adjacent areas) have been sub-divided for statistical and local administrative purposes, through cooperation with a local committee in each case. While this sub-division into tracts has been more or less arbitrary, several principles have been followed in general in laying out the tracts for each city. The tract areas are established with a view to approximate uniformity in population, with some consideration of uniformity in size, and with due regard for natural barriers. Each tract is designed to include an area fairly homogeneous in population characteristics. In cities where the ward lines are infrequently changed, the tracts may form sub-divisions of the wards, though they are usually laid out without regard to the ward boundaries. The tracts are intended to remain unchanged from census to census and thus to make possible studies of changes in social and economic characteristics of the population within small sections of the city.¹

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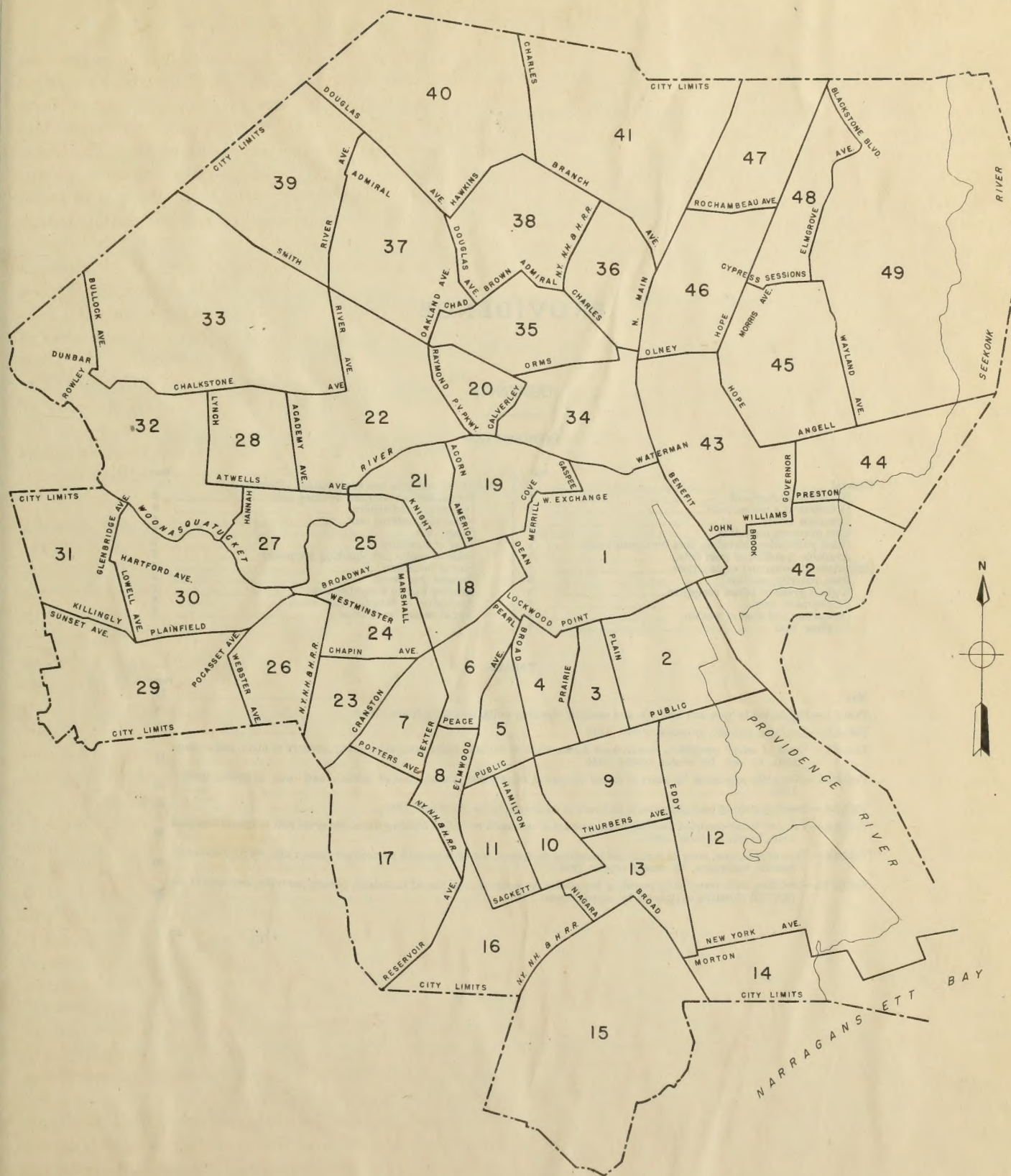


FIGURE I.

street names, rivers and railroads are given where these form the boundary between tracts. It should also be observed that it is possible for a person living on one side of a street to be in one census tract while the neighbor on the other side of the street is in another tract. This occurs when a street serves as the boundary between tracts. While it means that there must be some over-lapping in the populations of the various tracts as to their type and socioeconomic status, this must be the case when it is necessary to draw artificial borders.

The population within the census tracts ranges from 9,781 in tract number one to 1,696 in tract number thirty-one. The median population is 4,770. The small population within each census tract makes it difficult to obtain enough cases within each of these individual areas to arrive at any reliable conclusions. As a result it was necessary to alter the process to minimize the chance of error due to an insufficient statistical sample. As is pointed out in the evaluation of data for small areas:

Users of data for the smaller areas (5,000 and under) should bear in mind that the data compiled for such areas represent the work of a very small number of enumerators (often only one or two). Consequently, the data for such areas are subject to a wider margin of error than is to be expected for larger areas.... The misinterpretation by an enumerator of instructions pertaining to a particular item may cause a significant bias in the statistics for a very small community, even though it would have a negligible effect upon the figures for a large area.¹

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To compensate for this, and for the small number of psychotics in the smaller census tracts, certain tracts were combined into what the writer terms "neighborhood areas." Those tracts with a small population were combined with areas of a similar composition which are contiguous. There was no union of tracts that showed statistically significant variations. In certain cases it was necessary, because of the lack of an adjacent section with an equally homogeneous population, to use a single census tract as a neighborhood area. Fortunately, in the four cases where this was necessary, each census tract had an adequate population, larger than the median by a substantial margin.

This method offers many conveniences for statistical purposes. Our original forty-nine segments are now reduced to nineteen areas which are less unwieldy and more readily understood. For convenience of treatment we apply to each of these nineteen sub-divisions of the city the name that is customarily applied. Of course, since the apportionment was done more scientifically than is popular usage, many streets and sections will not fall into the classifications that are popularly held; but they are roughly similar. Table 1. (p.22) shows which census tracts were combined to form the neighborhood areas and Figure II. (p. 23), illustrates this graphically. Figure III. (p. 24), pictures the finished result which was used for plotting purposes in this work. It is to be noted that the neighborhood areas are for the most

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part smaller in the central section of the city and larger on the outskirts. This is indicative of the more crowded conditions in the industrial areas and of the heterogeneous populations that prevented the combining of many census tracts. The patterning of areas is also somewhat comparable to the concentric circle type of city divisions used in other studies, radiating from the Downtown or commercial-industrial section. Providence does not seem to be as amenable to such sharp cleavages as most other cities.

Each of the nineteen sub-divisions was inspected for certain criteria in order to evaluate its social composition or rate of deterioration. These criteria were per cent of native born whites, per cent of homes occupied by owners, median monthly rents, and median school years completed. All figures used are from the United States Census of 1940.¹ While it is recognized that there is a tendency for these criteria to overlap somewhat, this is true of all social phenomena. The use of these criteria does, however, represent an attempt to measure social conditions on an objective basis.

The term native born whites is self-explanatory. A person born in the United States or any of its territories or possessions is classified as native born. Any Mexicans that may be residing in the city are termed white. Negroes,

1. *ibid.* pp. 4-28.

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TABLE I.

PROVIDENCE NEIGHBORHOOD AREAS BY CENSUS TRACTS

Neighborhood Areas	Census Tract Nos.
1. Camp	46
2. Downtown	1
3. East Side	45, 47, 48, 49
4. Elmhurst	37, 39
5. Elmwood	5, 10, 11, 15, 16
6. Federal Hill	19, 21, 25
7. Fox Point	42
8. Lower East Side	43, 44
9. Manton	32
10. Mount Pleasant	22, 28, 33
11. North End	36, 38
12. Olneyville	26, 27, 30
13. Silver Lake	29, 31
14. Smith Hill	20, 34, 35
15. South Providence	2, 3, 4, 9
16. Wanskuck	40, 41
17. Washington Park	12, 13, 14
18. West End	6, 18, 24
19. West Elmwood	7, 8, 17, 23

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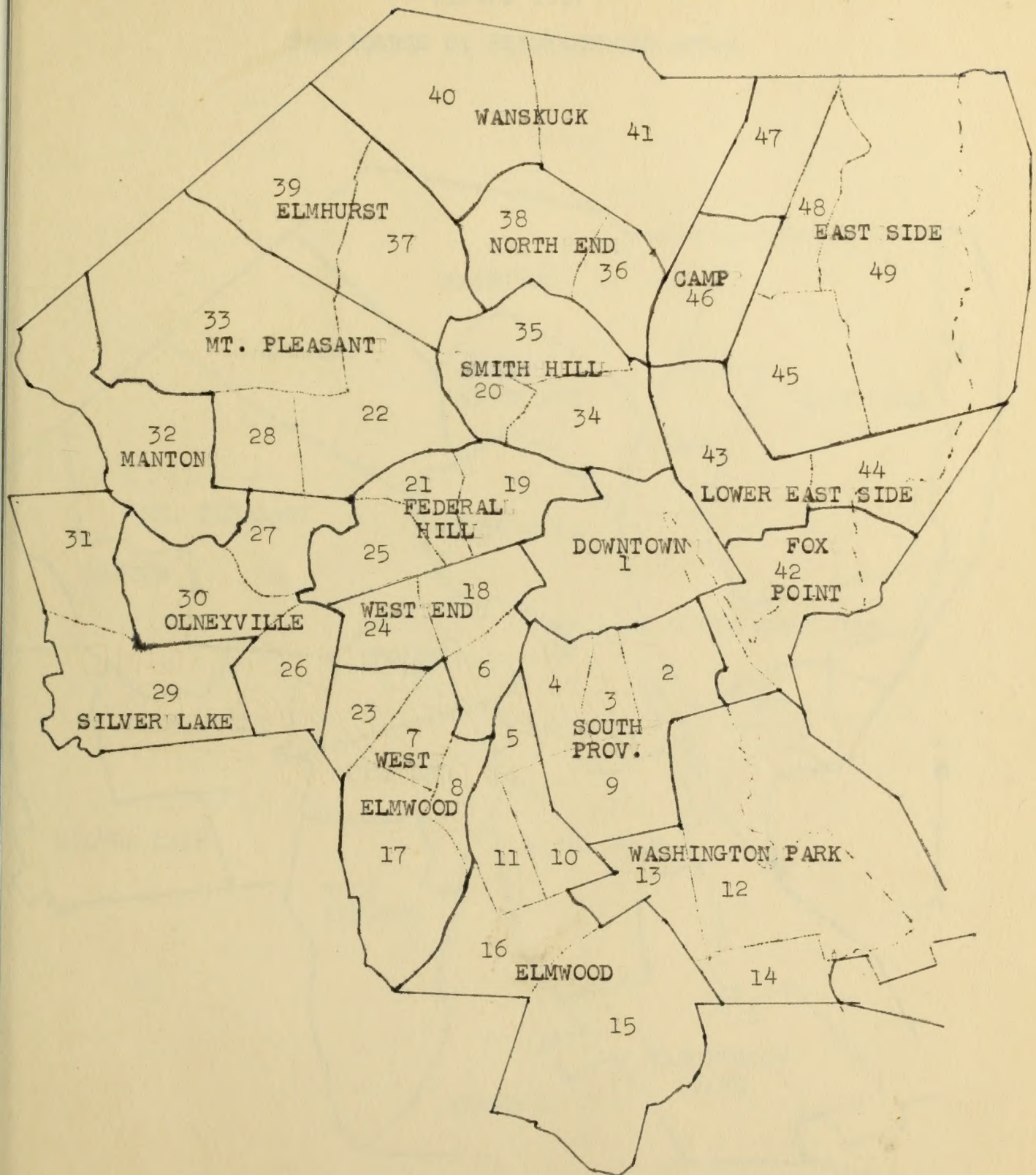


FIGURE II.

PROVIDENCE NEIGHBORHOOD AREAS BY CENSUS TRACTS

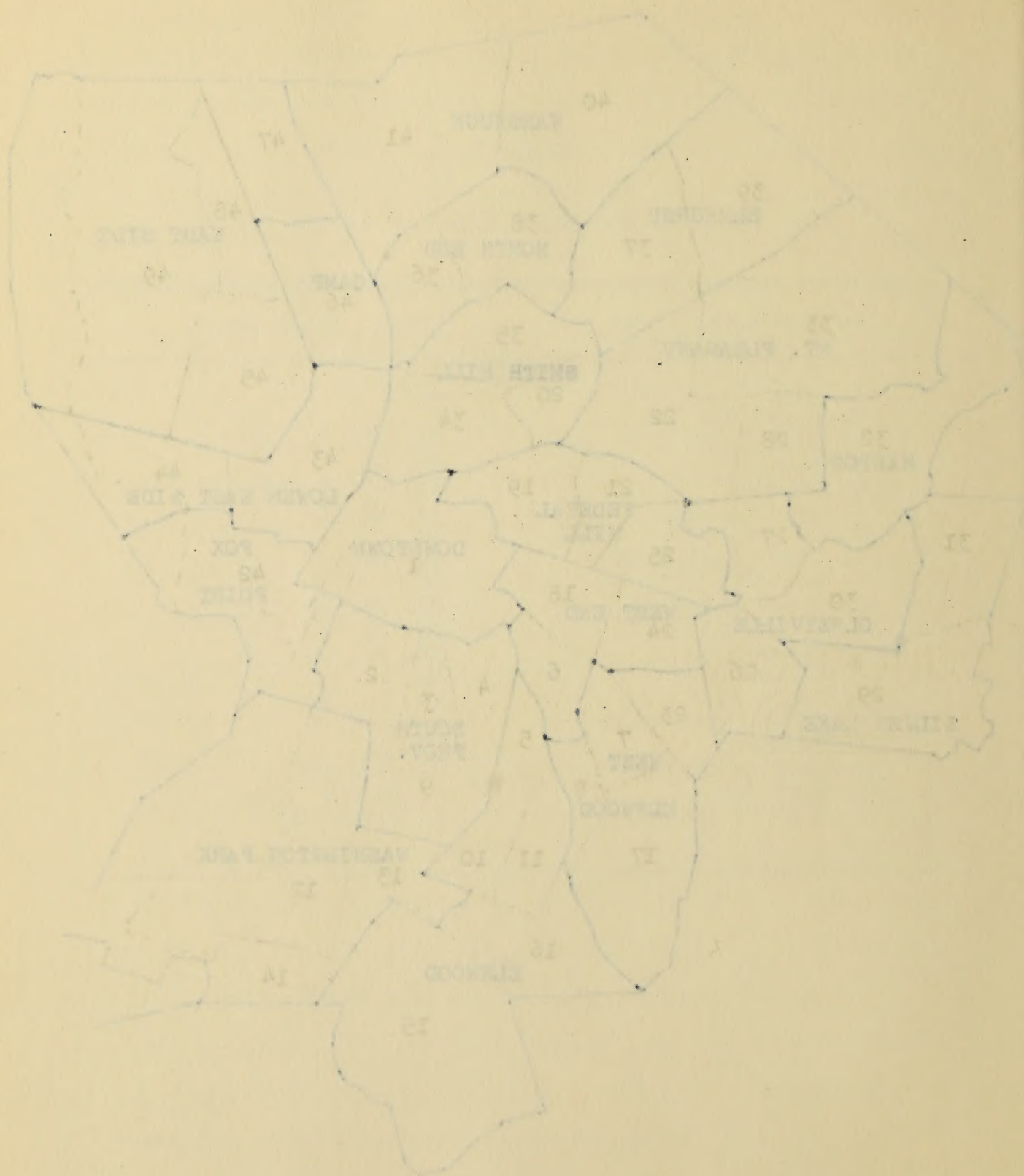


FIGURE 11.

SPRINGFIELD RETROPERIOD AREA BY GEORGE TRAVIS

FIGURE III.

PROVIDENCE BY NEIGHBORHOOD AREAS

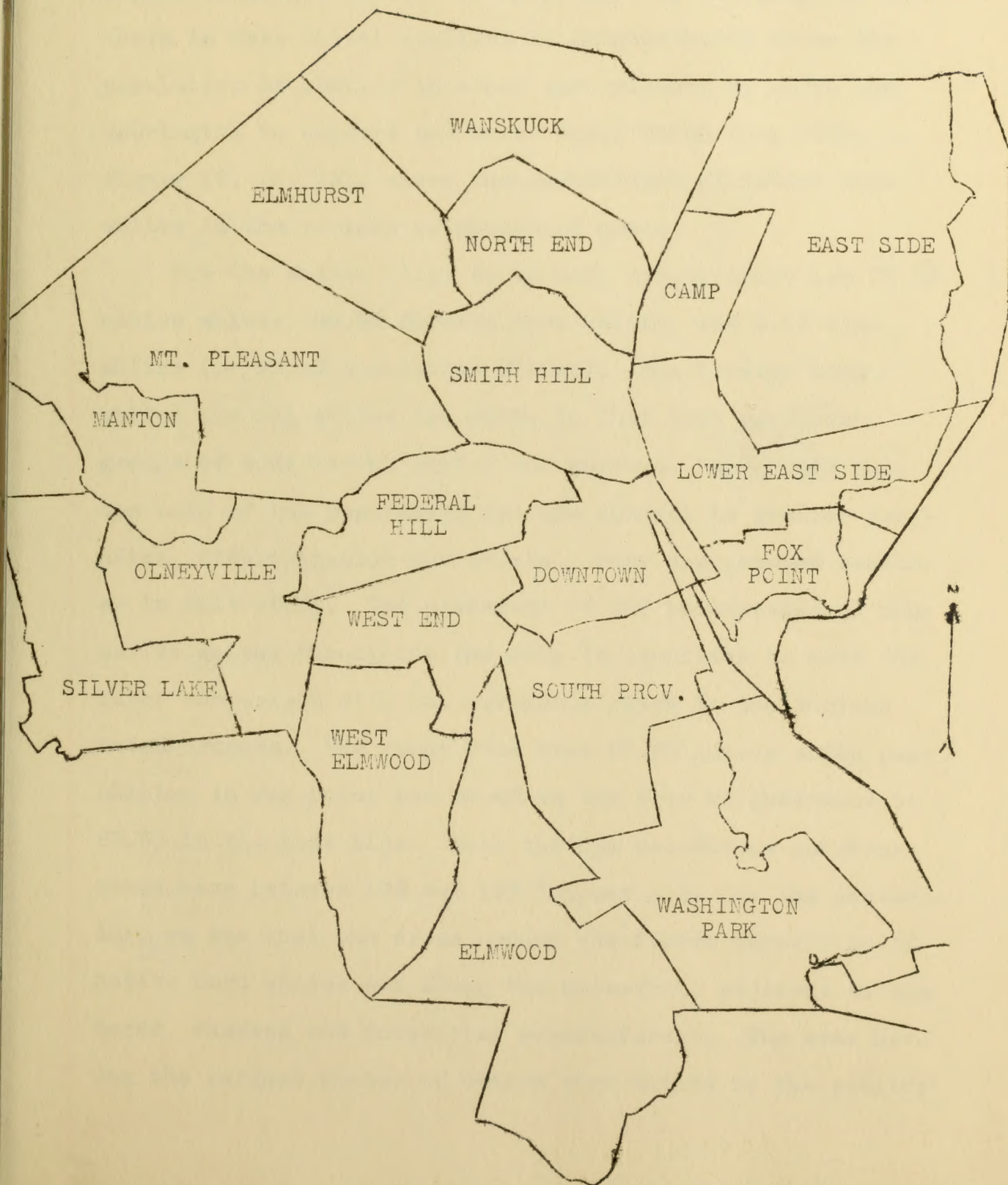
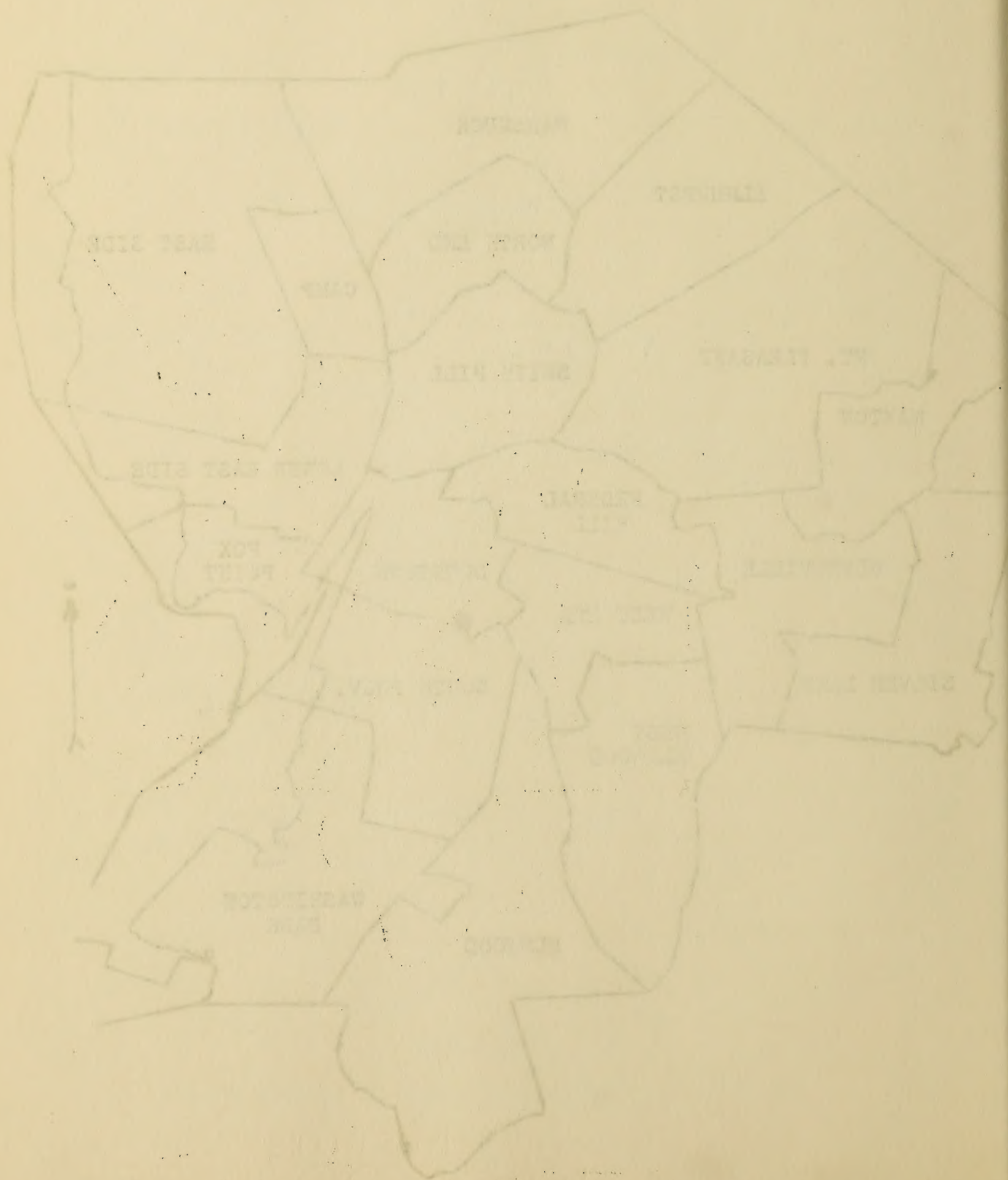


FIGURE 10
DIVISIONS OF THE DISTRICT



Chinese, etc., are classified as non-whites. The author's aim in a separation along these lines is to indicate the degree of social shock. It is assumed by sociologists that there is less social conflict in neighborhoods where the population is similar in color and oriented by birth and upbringing to customs and mores under which they live. Figure IV. (p. 26), shows the percentages of native born whites in the various neighborhood areas.

For the entire city, as we have noted, there are 77.2% native whites, 20.2% foreign born whites, and 2.6% non-whites (or 22.8% non-native whites). The foreign born whites and non-whites are alike in that both represent groups of a different social and cultural background than the bulk of the population and are subject to greater prejudice, discrimination and stress. They are grouped together in this study. The placement of the percentages of non-native whites throughout the city is important to note for later comparison with the psychotic rates in the various neighborhoods. The range runs from 64.6% native white population in Fox Point and 68.6% in the Camp Neighborhood to 85.6% in the East Side. Both the low percentage neighborhoods have between 12% and 15% Negroes. As for the patterning, we see that the areas having the lowest percentage of native born whites are along the waterfront adjacent to the docks, wharves and industrial manufacturers. The area having the largest number of native born whites is the wealthy

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FIGURE IV.

PERCENTAGE OF NATIVE BORN WHITES
BY NEIGHBORHOOD AREAS IN PROVIDENCE, 1940

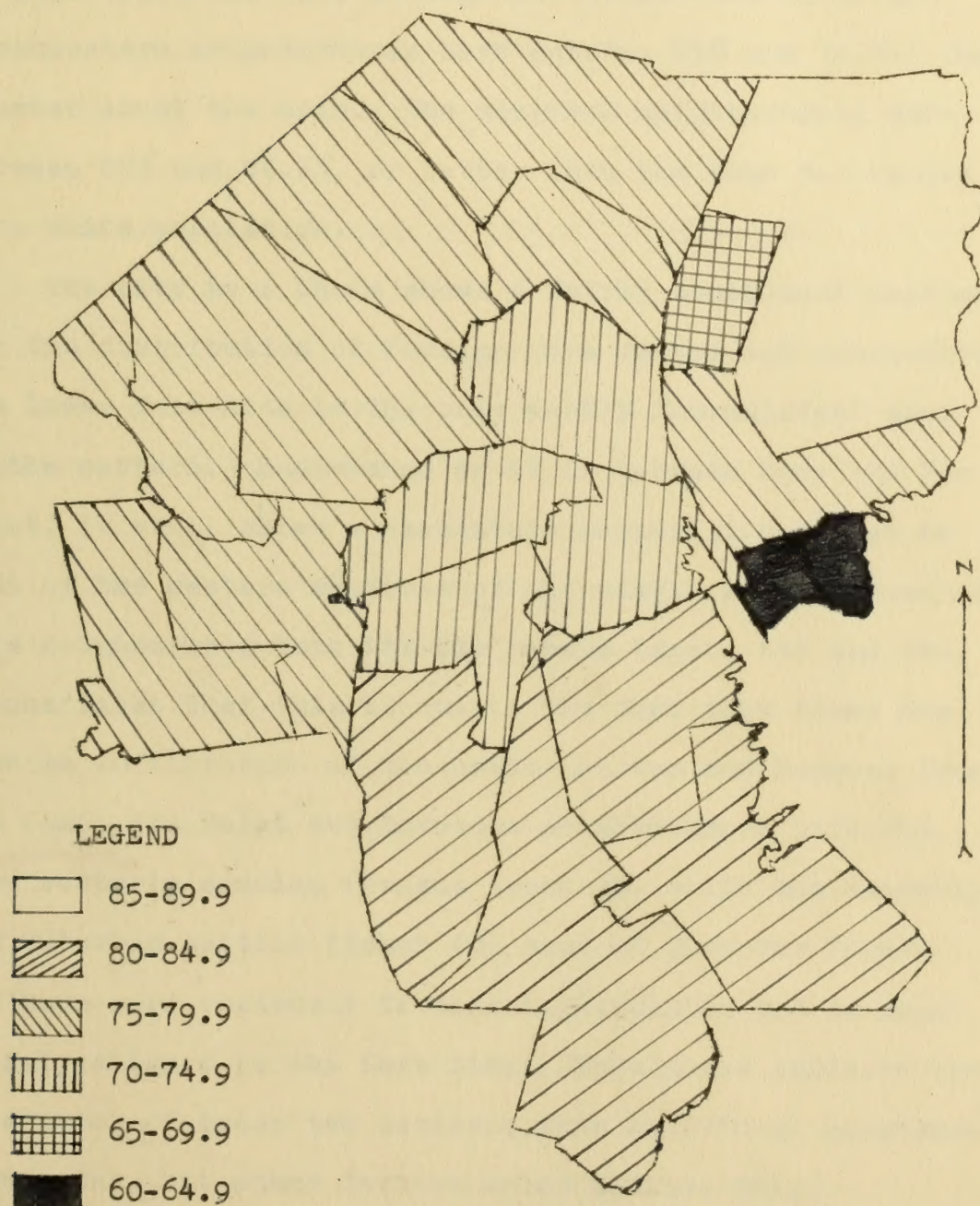
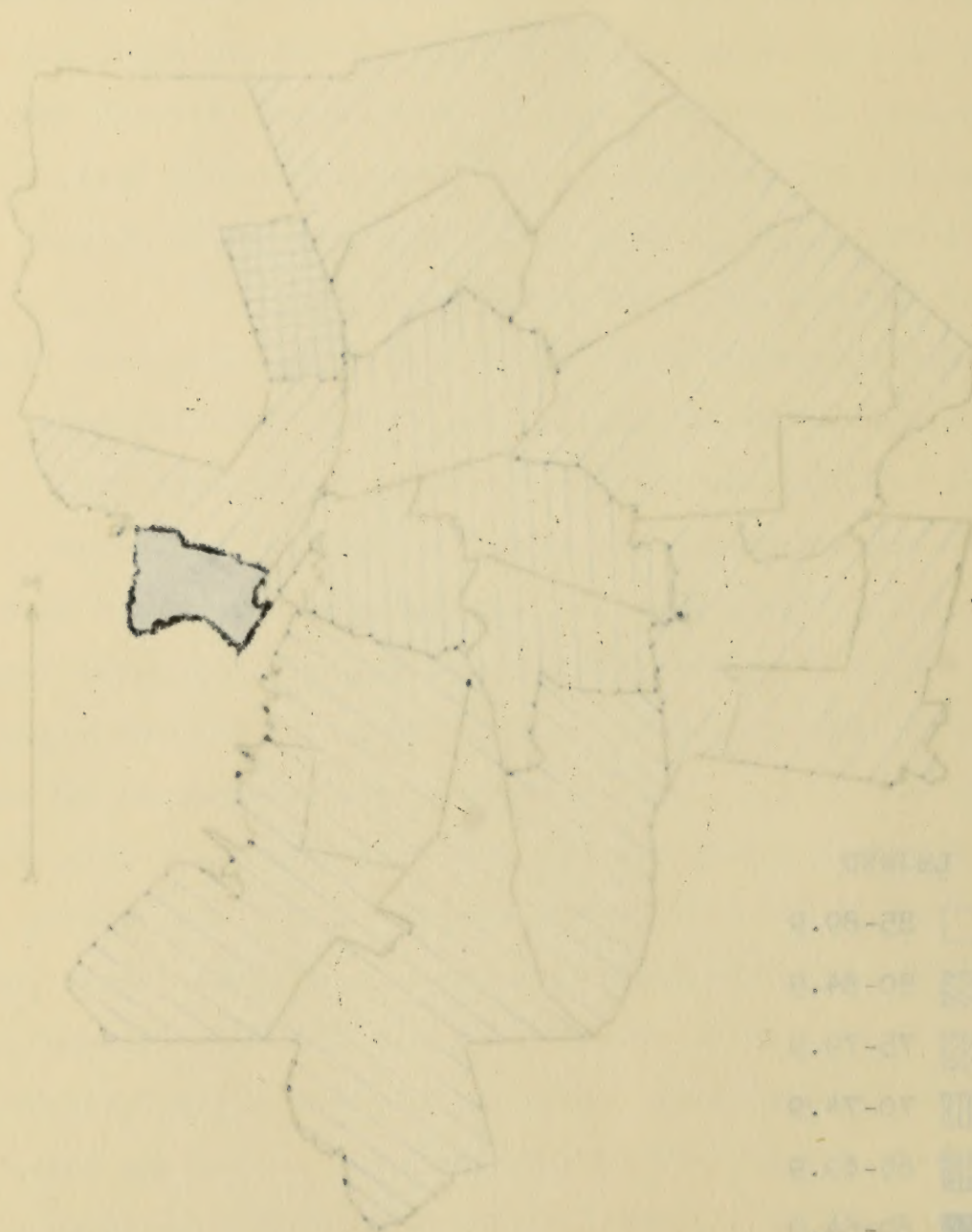


FIGURE IV.

TEMPERATURE BY MONTH AND PLACE
OF OBSERVATION, 1940



Legend

85-90.0	[Pattern]
80-84.9	[Pattern]
75-79.9	[Pattern]
70-74.9	[Pattern]
65-69.9	[Pattern]
60-64.9	[Pattern]

East Side. The center of the city with its surrounding neighborhoods has between 70% and 74.9% native born whites, or just below the city average of 77.2%. The north and northwestern neighborhoods have between 75% and 79.9%; they cluster about the mean. The southern neighborhoods have between 80% and 84.9%, or better than the mean for native born white population.

The city as a whole shows a fairly consistent pattern for the distribution of foreign born whites and non-whites. The Lower East Side is the only really inconsistent area in the pattern. Sandwiched as it is between Camp and Fox Point, it still shows a percentage composition closer to that of the western sections of the city. A break down of this neighborhood into its two census tracts (43 and 44), demonstrates that this is due to the fact that there has been an infiltration of non-native whites and Negroes from the Camp, Fox Point and Downtown neighborhoods into the more westerly section (census tract 43) while the easterly and suburban section (tract 44) east of Governor Street has been more resistant to this infiltration and is more closely aligned to the East Side. This might indicate the separation of these two sections into individual neighborhood areas, but other factors ruled against this.

The next criterion applied to the various neighborhoods was that of percentage of homes owned by the persons who live in them. A high degree of home ownership indicates

East Side. The center of the city with its surrounding neighborhoods has between 70% and 74.9% native born whites, or just below the city average of 77.2%. The north and northwestern neighborhoods have between 73% and 79.9%; they cluster about the mean. The southern neighborhoods have between 80% and 84.9%, or better than the mean for native born white population.

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The next criterion applied to the various neighborhoods was that of percentage of homes owned by the persons who live in them. A high degree of home ownership indicates

a high degree of stability. It also points to an amount of economic security and financial well being. In general, we find that those neighborhoods where people have invested their money in homes that they live in are kept in better condition and have a more permanent population than other neighborhoods.

The per cent of homes occupied by owners was tabulated according to those homes so occupied at the time of enumeration during the 1940 census. Other classifications made, but not used for this study, were "tenant-occupied" and "vacant, for sale or rent," and "vacant, not for sale or rent."

Figure V. (p. 29), shows the percentage of owner occupied homes in each of the neighborhood areas. For the entire city 27.8% of the homes are occupied by their owners. The range is from 7.6% of the homes occupied by their owners in the Downtown Neighborhood Area to 52.9% in the East Side. The patterning in this instance is almost a perfect radiation from the Downtown area in the center of the City to the greater concentrations of home ownership in the outlying areas. It is to be noted that Elmhurst, East Side and Camp all have a proportion of better than 50%. The next best sections in this regard are Washington Park, Elmwood, Wanskuck and Manton. While they are in opposite points in the city, they all have the advantage of distance from the central business district.

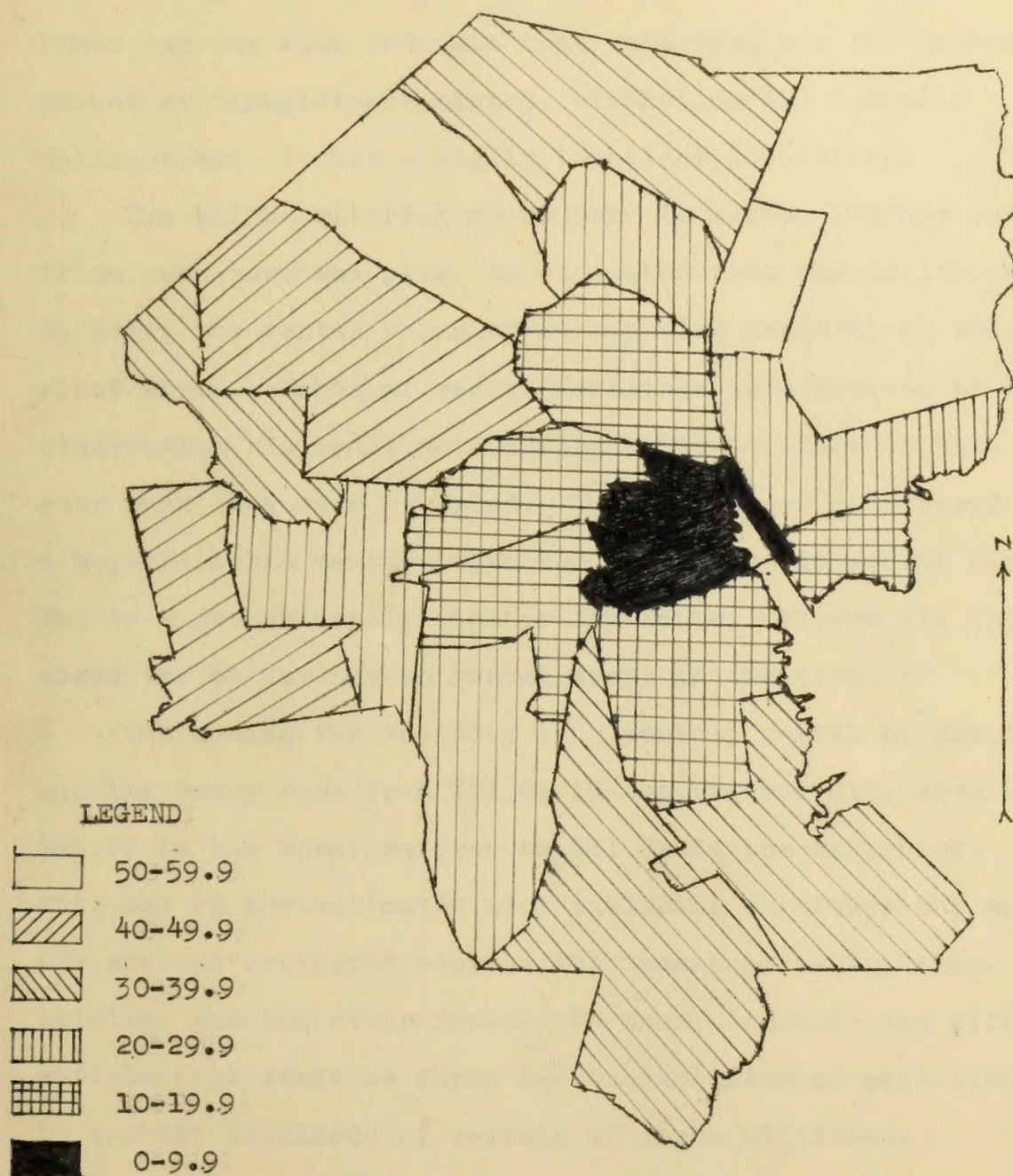
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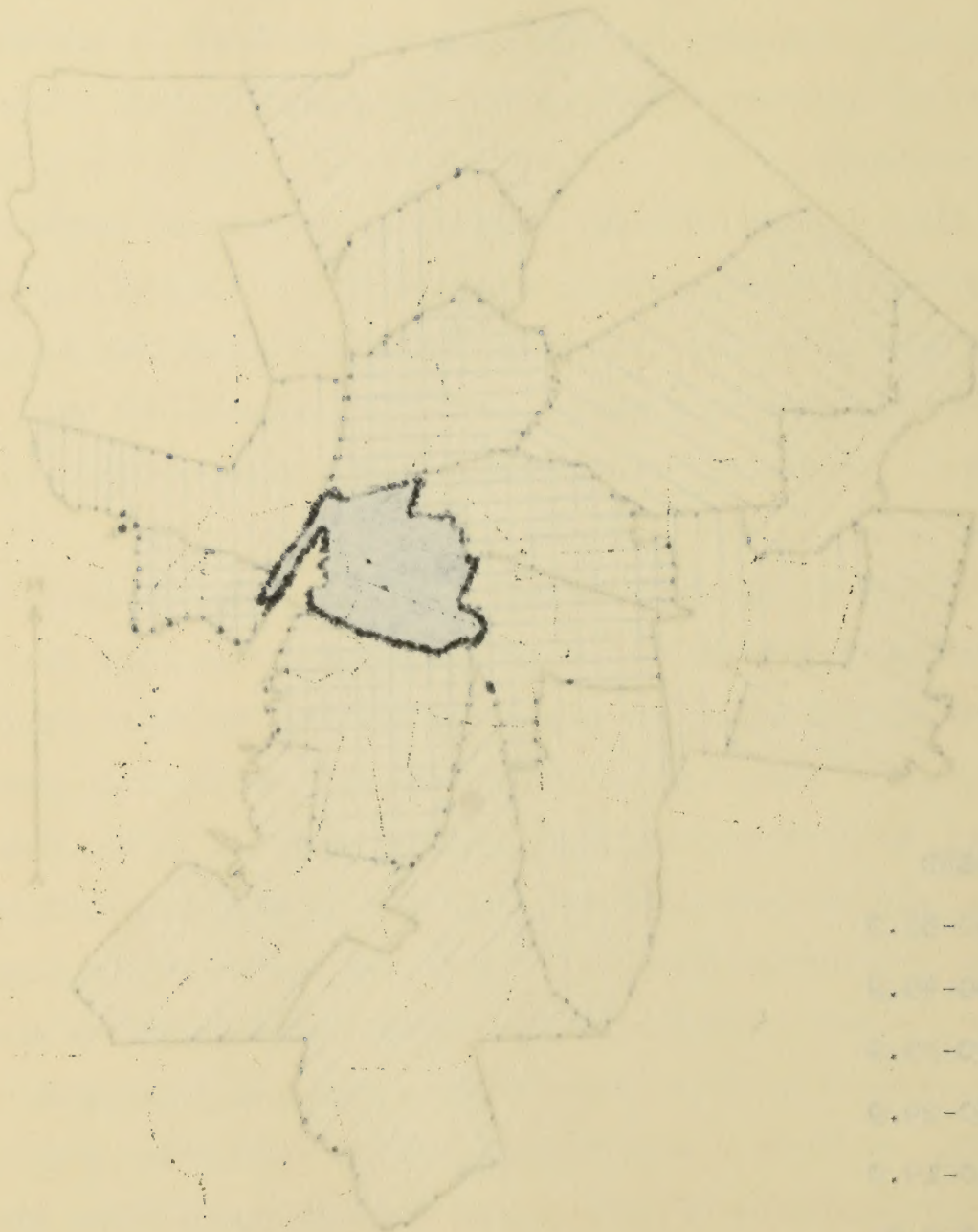
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FIGURE V..

PERCENTAGE OF OWNER-OCCUPIED HOMES
BY NEIGHBORHOOD AREAS IN PROVIDENCE, 1940



MAP OF THE DISTRICT OF COLUMBIA
SHOWING THE LOCATION OF THE
FEDERAL BUREAU OF INVESTIGATION



Legend	
1. 1-10	[Symbol]
2. 11-20	[Symbol]
3. 21-30	[Symbol]
4. 31-40	[Symbol]
5. 41-50	[Symbol]
6. 51-60	[Symbol]
7. 61-70	[Symbol]
8. 71-80	[Symbol]

That the central section of the city has the lowest percentage of home ownership is to be expected. This is the rooming house section and considered the slum area. Other reports also indicate that this area has the greatest amount of illegitimate births, alcoholism and juvenile delinquency. It has a highly transient population.

The third criterion to be used is median monthly rents. If no cash rent was paid, an estimated rent was arrived at by using the rental value of surrounding property of equivalent worth. Rents of vacant dwellings were arrived at by discovering the rents paid during those portions of the year when they were occupied. The median was considered a more reliable measure than the mean since it avoids bias due to a few extremely high or low rents. Figure VI. (p.32) shows the difference in rental areas in the city.

The median for the city is a monthly rental of \$28.65, and the range runs from \$21.61 in the Federal Hill area and \$21.72 in the Downtown area to \$61.59 in the East Side. This was on the estimated rent excluding furniture but with the average estimated cost to the tenant of water, electricity, gas and other fuels. We thus eliminate the differentials that would be shown due to inclusion or exclusion by certain landlords of certain of these utilities.

The patterning of rents is not as definite as that of some of the other factors. We see that the high rental neighborhoods are the East Side, Lower East Side and, in the

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The median for the city is a monthly rental of \$28.55, and the range runs from \$21.81 in the Federal Hill area and \$21.72 in the Downtown area to \$51.52 in the East Side.

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The patterning of rents is not as definite as that of some of the other factors. We see that the high rental neighborhoods are the East Side, Lower East Side and, in the

southern part of the city, Elmwood and Washington Park. The center of the city is the low rent area, but we see that in addition to Federal Hill, Downtown and Fox Point, Wanskuck and North End are also low rent sections. Olneyville and Silver Lake in the western section are also low rent neighborhoods.

Unlike studies done on many other cities, this does not show the sharp rental differentials as areas become further removed from the center of the city. This is probably influenced by the nature of the textile industry which has located in the outer reaches of the city as Wanskuck, Olneyville and Silver Lake.

The fourth criterion this writer applied to the neighborhood areas was educational. This was the measure of median school years completed. For this purpose the last full year completed in the regular school system, including public, private, parochial school or college or university was used. The census of school years completed was restricted to persons twenty-five years of age and over, since it is assumed that for all practical purposes they have finished their formal schooling. For the use of median years the first year of high school is computed as year nine.

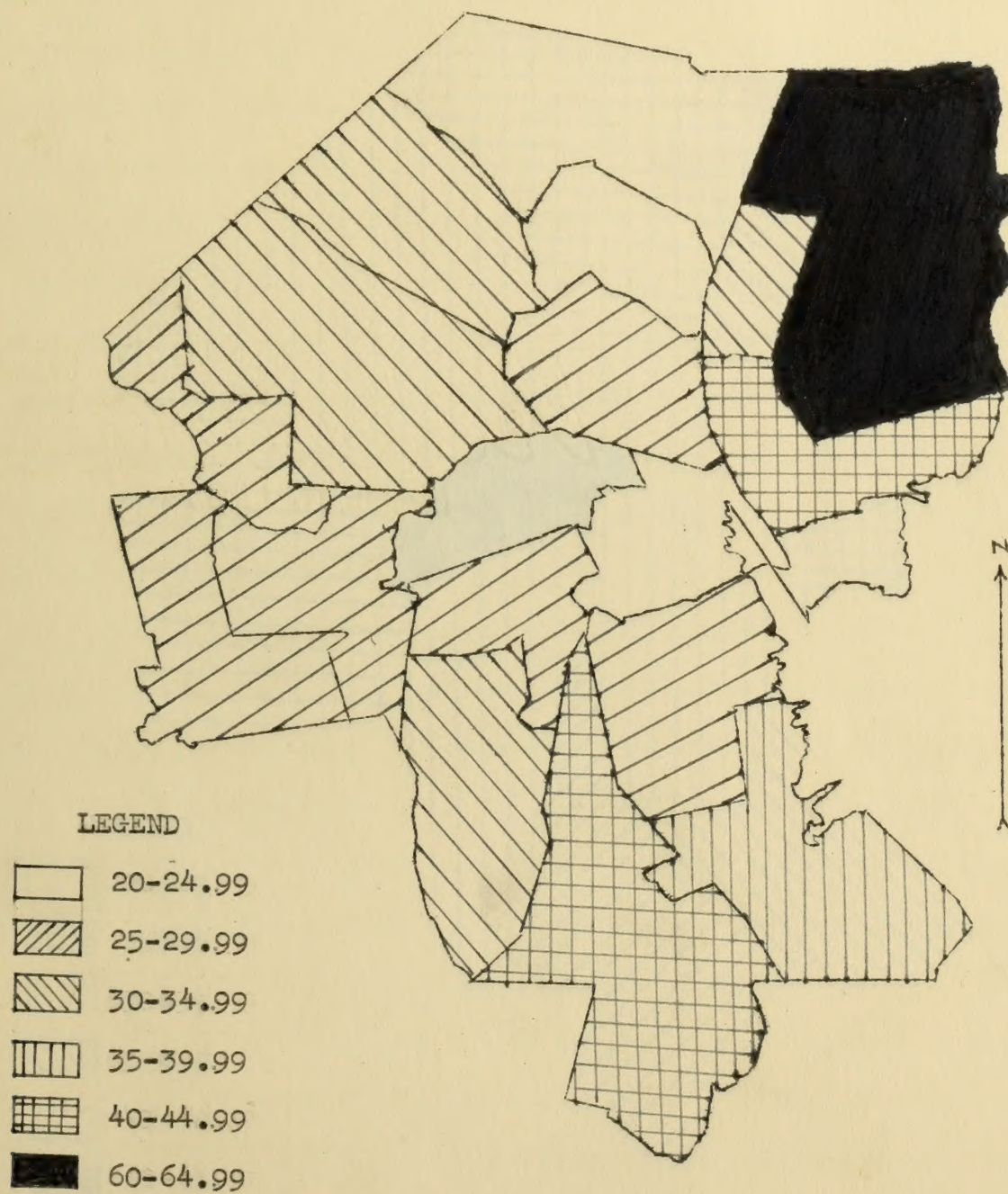
Figure VII. (p. 33), shows median year of school completed in each of the neighborhood areas. The median school year completed in the city as a whole by persons twenty-five years of age or older is 8.4. The range moves from 6.6

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FIGURE VI.
MEDIAN RENTS
BY NEIGHBORHOOD AREAS IN PROVIDENCE, 1940



UNITED STATES
BUREAU OF LAND MANAGEMENT
OFFICE OF THE ASSISTANT ATTORNEY GENERAL

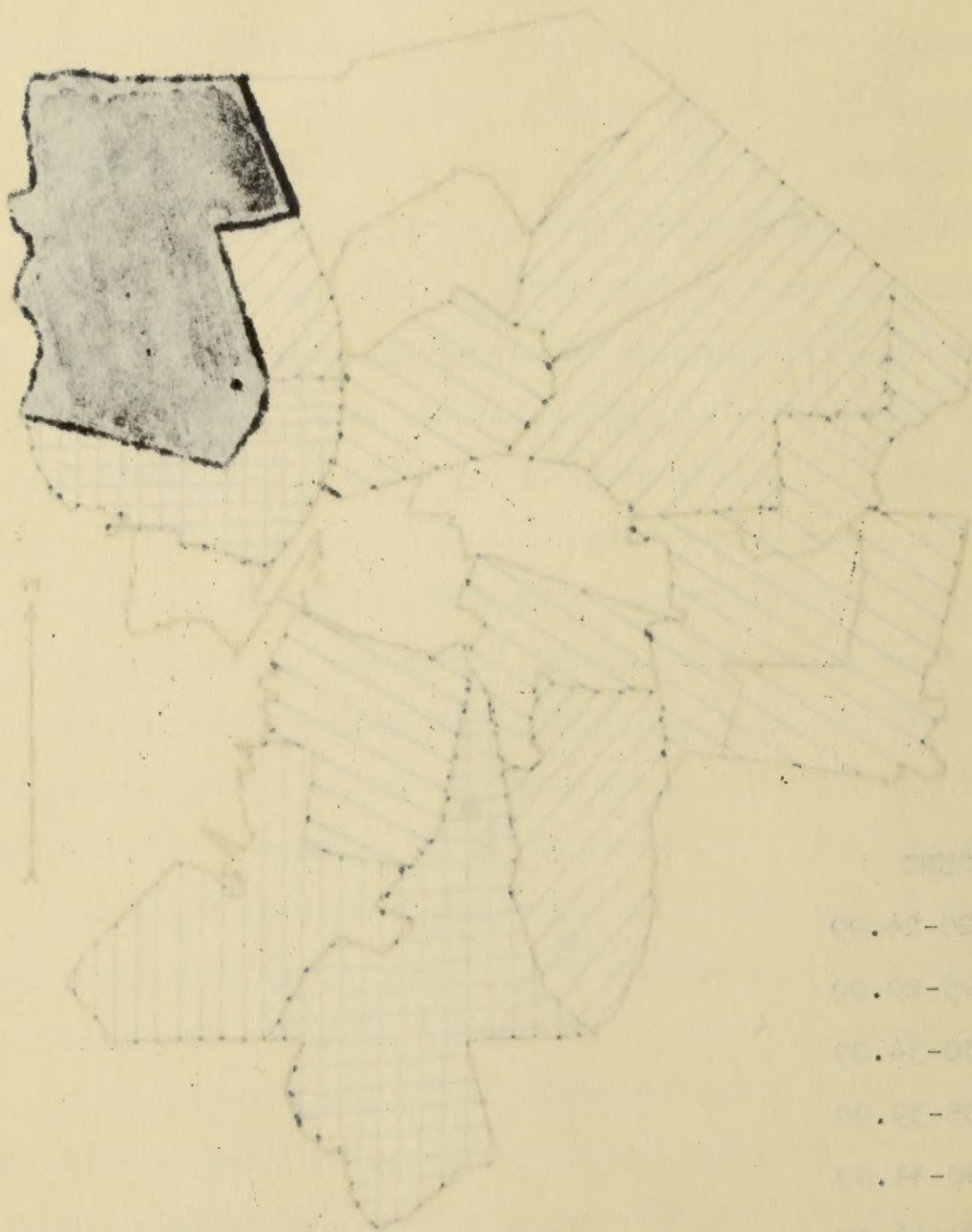
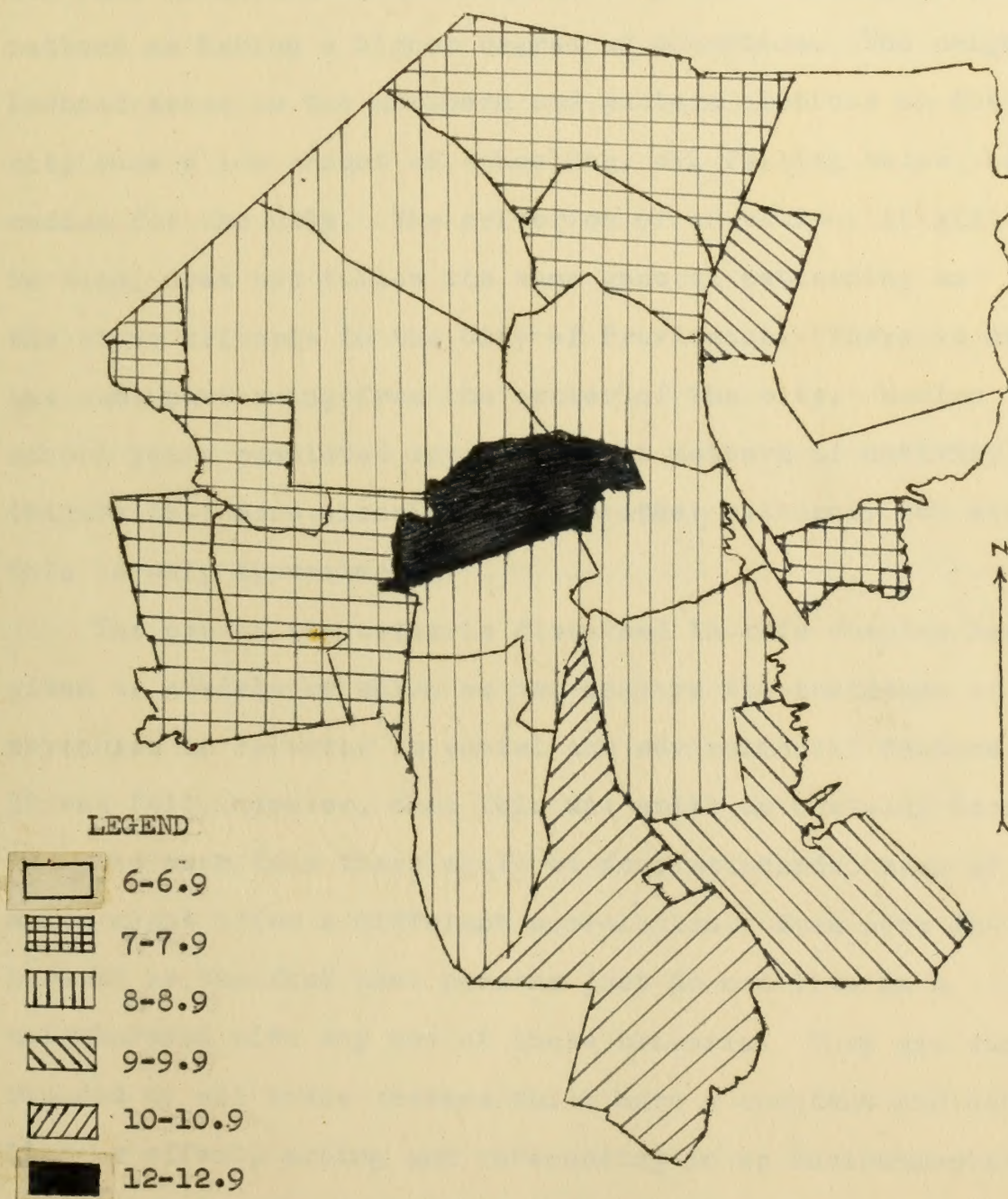


FIGURE VII..

MEDIAN SCHOOL YEARS COMPLETED
BY NEIGHBORHOOD AREAS IN PROVIDENCE, 1940*



* Persons 25 years of age and older.

FIGURE VII.

INDIAN SCHOOL YEARS COMPLETED
BY INDIAN SCHOOL GRADUATES IN PROVIDENCE, 1940*



* Persons 15 years of age and over.

years in the Federal Hill Neighborhood to 12.6 in the Lower East Side and 12.07 in the East Side. Elmwood and Washington Park in the southern suburban area also show up in the pattern as having a higher degree of education. The neighborhood areas in the northern and western sections of the city show a low amount of schooling, all falling below the median for the city. The criterion of education, it will be seen, does not follow the same general patterning as the other criteria in the City of Providence. There is not the same patterning from the center of the city. Median school years completed approaches the pattern of nativity (Figure IV.) more closely than the other patterns, but even this is only approximate.

The use of the criteria discussed in this chapter has given us a scale by which we can measure the incidence of psychoses in relation to social and environmental factors. It was felt, however, that this was still an unwieldy form. It would mean that there would be four standards, each of which might offer a different correlation. Even more important is the fact that persons just do not live in a neighborhood with any one of these criteria. They are surrounded by all these factors which have a constant and continuous effect, acting and interacting in an environmental influence upon the individual. To try to isolate any one of these factors without accounting for other omnipresent values is an impossible task.

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In order to provide for this and offer a uniform social scale that might be applied to any neighborhood area in the city, an index was devised to group the four criteria into one index figure for each neighborhood. For each criterion the neighborhood areas were arranged in rank order from one to nineteen. In each case the number one ranking was given to that area having the best sociological conditions for the criterion being measured and number nineteen for the worst conditions. Number one ranking was given for the percentage of native born whites, the highest percentage of homes occupied by owners, highest median monthly rents, and the greatest number of median school years completed. Each neighborhood area received a number from one to nineteen. In cases where two neighborhood areas had the same score for a criterion, the rank was halved between them, i.e., if two sections tied for position eight and nine in median school years completed, they were given the rank eight and a half and ranks eight and nine were not used. As far as the writer knows from his inspection of the literature, this method of indexing a city has never been used before.

The gross scores were then totaled for each neighborhood area for the four criteria, and the neighborhood areas were ranged from low score to high score and in turn given one index number from one to nineteen. The lowest number (one) is judged to have the best environmental conditions

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while the highest number (nineteen) is judged to have the worst. The numbers between one and nineteen give the rank order of all the other neighborhood areas. While some criticism may be levelled against this method since it does not give weight to amounts of each criterion, it is accurate for the ranking of the sub-divisions of the city, and this is what this study is primarily interested in.

Table II. (p. 37), gives the index numbers for each of the neighborhood areas with its rank order in the city. As might be expected, the East Side is easily the possessor of the best environmental influences and is accordingly ranked one. Two areas, Elmwood and Washington Park, are tied for position in the number two rank. In the worst position is the Federal Hill area closely following Fox Point. This is contrary to the general assumption in working with ecological data, which usually presumes that the Downtown section must have the worst living conditions. Here we see that in Providence the areas immediately adjacent to the center of the city provide the least favorable sociological conditions.

To check the validity of our index scores a graph was drawn to see how closely it would approximate a normal curve of distribution. Figure VIII. (p. 38), demonstrates this distribution. The curve has the same general shape as a normal curve, but it is skewed somewhat to the left. This was to be expected from the U. S. Census figures,

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TABLE II.

PROVIDENCE NEIGHBORHOOD AREAS BY INDEX NUMBERS

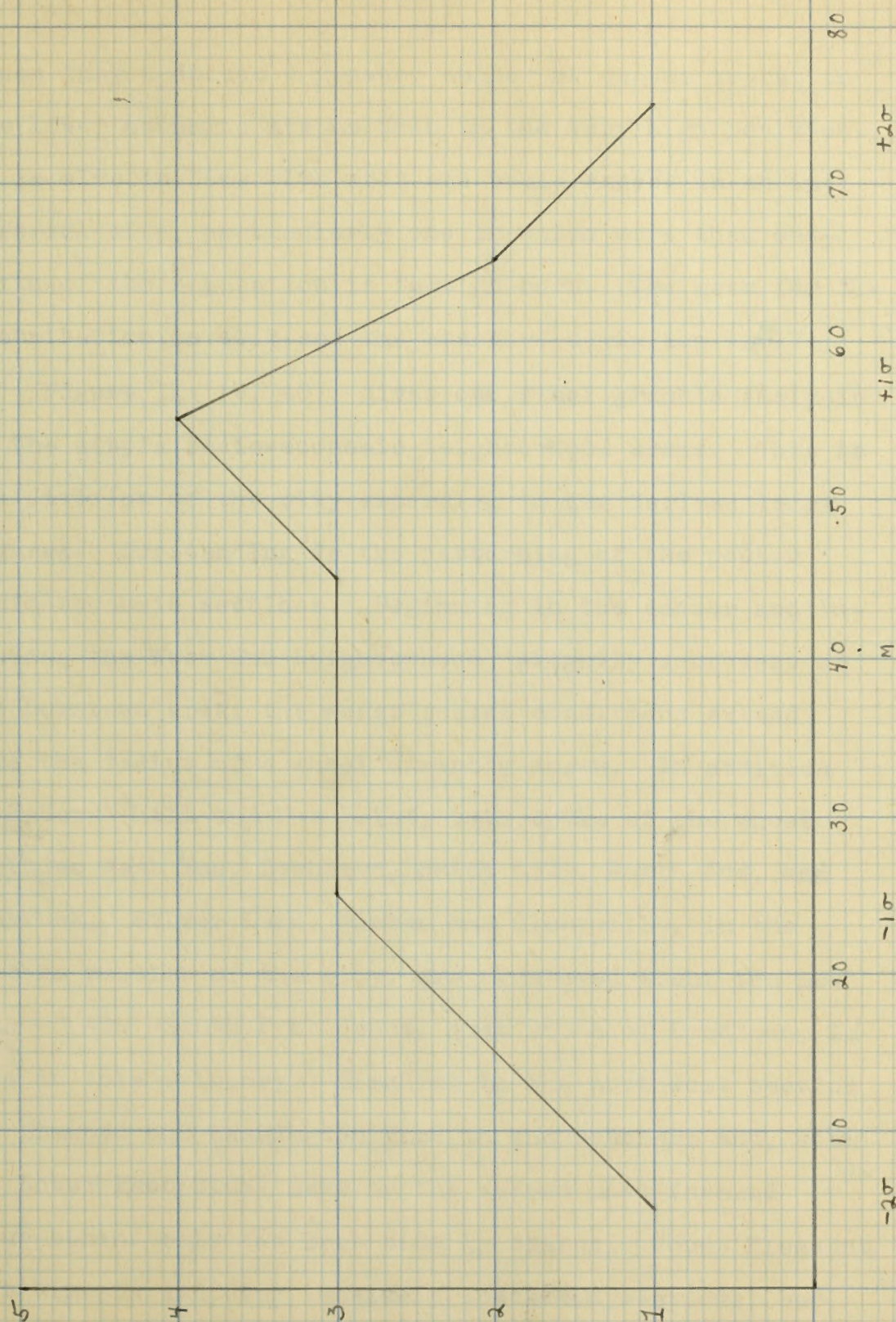
Neighborhood Areas	Index Numbers	Rank Order
East Side	5	1
Elmwood	17	2
Washington Park	17	2
Lower East Side	22	4
Elmhurst	$25\frac{1}{2}$	5
West Elmwood	30	6
Mount Pleasant	$32\frac{1}{2}$	7
Camp	34	8
Manton	$38\frac{1}{2}$	9
Silver Lake	42	10
South Providence	$42\frac{1}{2}$	11
Olneyville	45	12
Smith Hill	$50\frac{1}{2}$	13
North End	52	14
Wanskuck	55	15
West End	56	16
Downtown	$64\frac{1}{2}$	17
Fox Point	69	18
Federal Hill	71	19

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Elmwood	17	2
Washington Park	17	3
Lower East Side	22	4
Elmhurst	23	5
West Elmwood	30	6
Mount Pleasant	32	7
Camp	34	8
Manton	38	9
Silver Lake	42	10
South Providence	42	11
Olneyville	45	12
Swain Hill	50	13
North End	52	14
Wanskuck	53	15
West End	56	16
Downtown	64	17
Fox Point	69	18
Federal Hill	71	19

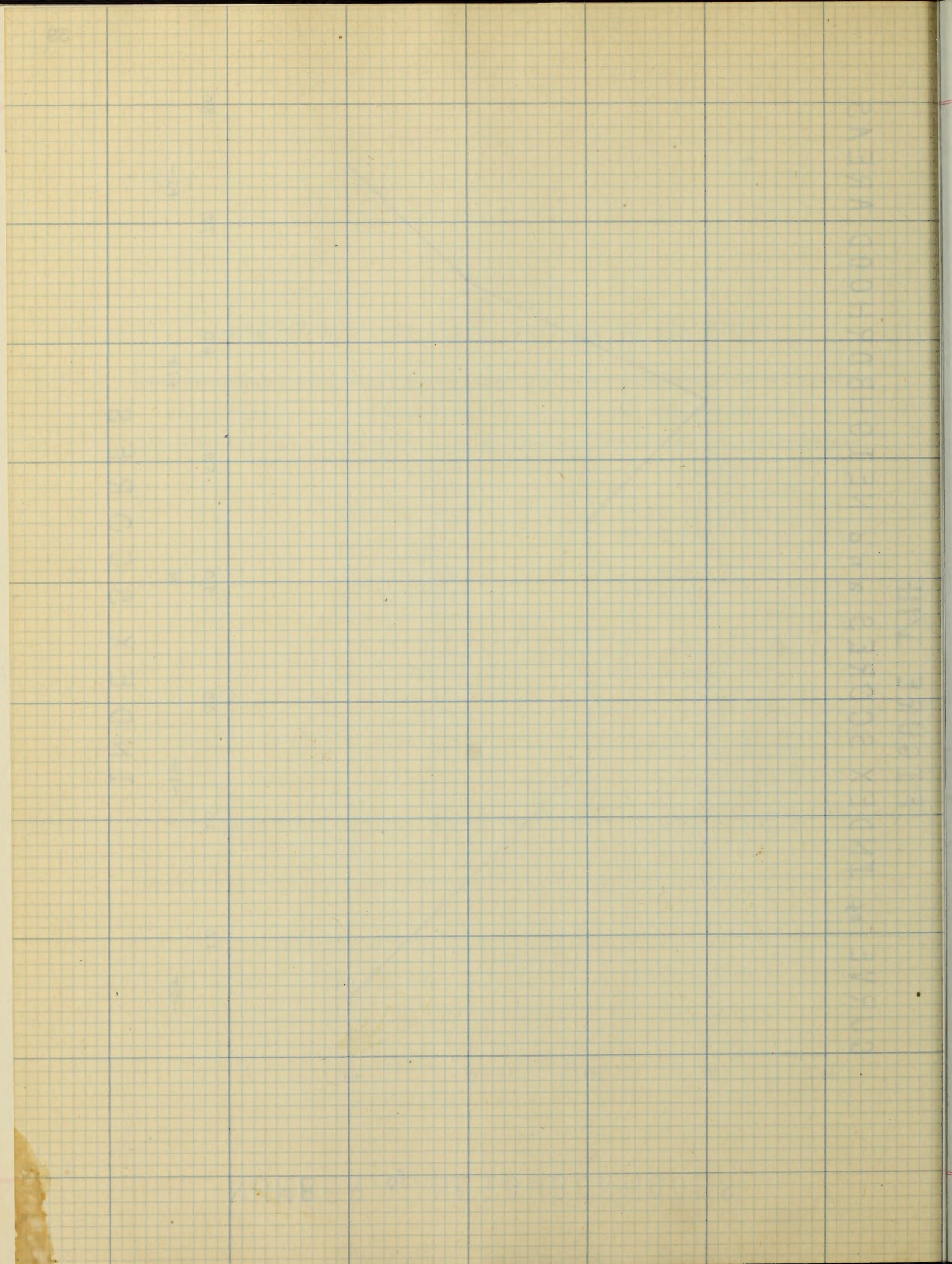
FIGURE VIII.

CURVE of INDEX SCORES and NEIGHBORHOOD AREAS



INDEX SCORES

NUMBER of NEIGHBORHOODS



since they indicate a greater number of census tracts in the lower economic status than in the very high position. It is also in line with what one would expect in an industrial city, particularly one in which more than one-fifth of the population is foreign born. The mean for the distribution is 40.5 and the standard deviation is 17.

Figure IX. (p. 40), gives our final graphic analysis of the city's socio-economic neighborhood areas. This is the division of the city according to our derived index figures. Outstanding is the patterning of the poorer socio-economic sections. Beginning in the center and including the West End Neighborhood, slightly southwest of the Downtown area, the worst social conditions extend like the radius of a wheel directly north. In addition to Federal Hill and Fox Point, this spoke of the wheel includes West End, Downtown, Smith Hill, North End, and Wanskuck. Silver Lake, Manton and Olneyville, in the western section of the city, are clustered about the median of 42. South Providence, just south of Downtown, is also in this category. Elmhurst in the northwest section and Elmwood and Washington Park in the southern end, with the Lower East Side, make up the second most favored group behind only the East Side in status. Mount Pleasant, West Elmwood and Camp in widely scattered sections, but in relatively similar locations in respect to the industrial area, are in the third position, enjoying a status

since they indicate a greater number of census tracts in the lower economic status than in the very high position. It is also in line with what one would expect in an industrial city, particularly one in which more than one fifth of the population is foreign born. The mean for the distribution is 40.8 and the standard deviation is 17.

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FIGURE IX.

INDEX OF SOCIO-ECONOMIC STATUS
BY NEIGHBORHOOD AREAS IN PROVIDENCE, 1940

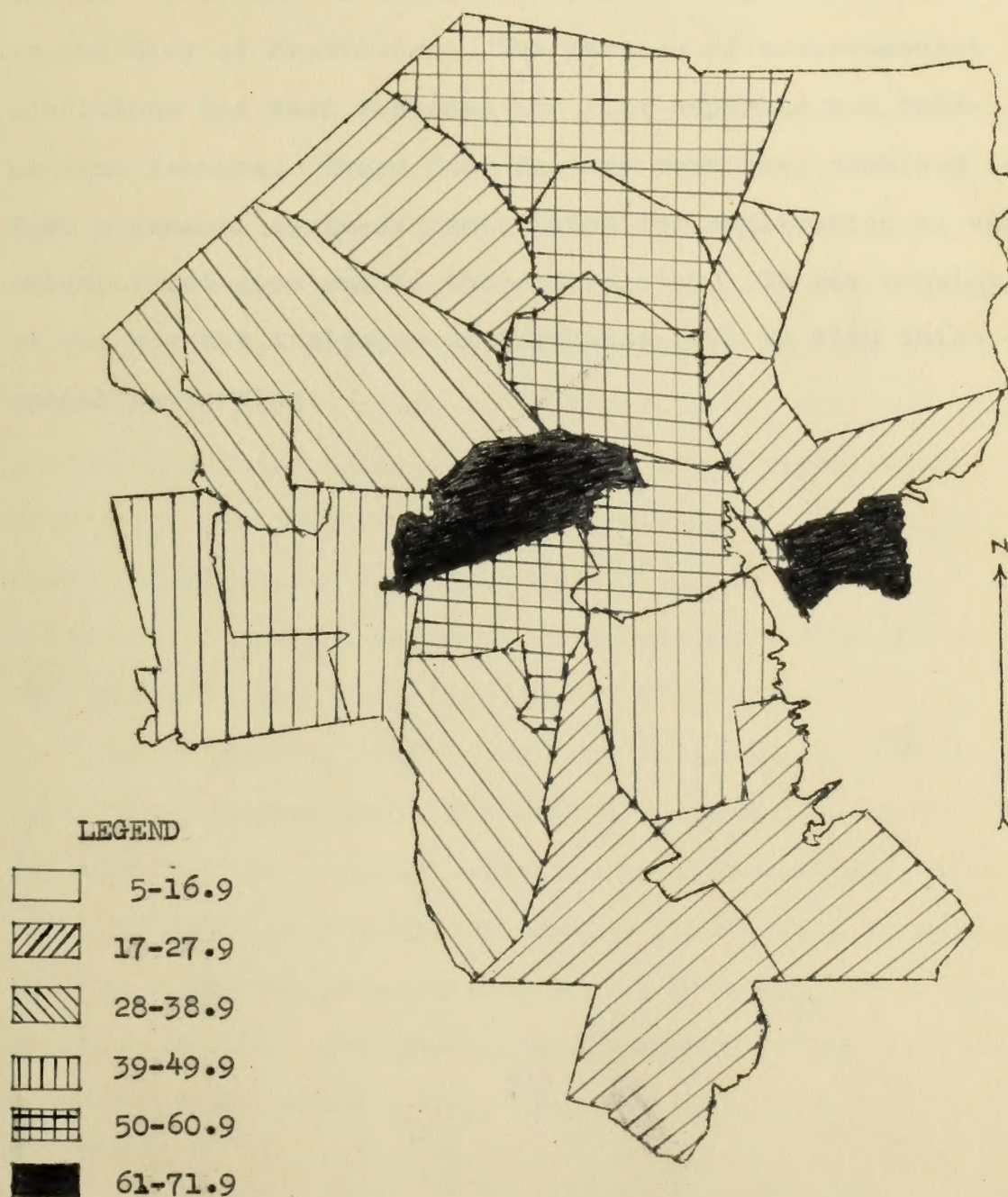


FIGURE 12

INDEX TO WEST-INDIAN PLANTS
BY WILSON, J. B. 1940



Legend

0-10.0	[White box]
10-20.0	[Diagonal lines box]
20-30.0	[Cross-hatch box]
30-40.0	[Horizontal lines box]
40-50.0	[Vertical lines box]
50-60.0	[Stippled box]
60-70.0	[Dark blue box]

better than the mean or median for the whole city.

The foregoing chapter has outlined the relative socio-economic position of nineteen separate neighborhood areas in the City of Providence. The pattern of environmental conditions has been sketched for four separate and independent factors. These four factors were then combined to form a general socio-economic index for application to each neighborhood area and to the entire city. It now remains to see how the incidence of psychoses fits in with this social patterning.

Since this hospital used the classification as approved by the American Psychiatric Association, this form was used for this work. Only diagnoses actually used in this thesis are discussed here. Those listed but not encountered as actual admissions to this hospital have been ignored.

Psychosis with cerebral arteriosclerosis is a disease usually associated with late middle age and old age.¹ A sclerosis of the cerebral blood vessels takes place, and there is a mental disorder which may fluctuate. It may accompany general arteriosclerosis or be localized in the cerebral region. Why the arteriosclerosis should localize in the brain is still unknown. Age of onset is usually between

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CHAPTER IV.

DESCRIPTION OF THE PSYCHOSES.

It is the purpose of this chapter to define and describe the various psychoses used in this study. As has already been mentioned in Chapter I. the records used in this survey were those of the Rhode Island State Hospital for Mental Diseases, Howard, Rhode Island, for the period 1938 through 1947 inclusive. Since this hospital used the classification as approved by the American Psychiatric Association, this form was used for this work. Only diagnoses actually used in this thesis are discussed here. Those listed but not encountered as actual admissions to this hospital have been ignored.

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Psychoses with cerebral arteriosclerosis is a disease usually associated with late middle age and old age.¹ A sclerosis of the cerebral blood vessels takes place, and there is a mental disorder which may fluctuate. It may accompany general arteriosclerosis or be localized in the cerebral region. Why the sclerosis should localize in the brain is still unknown. Age of onset is usually between

1. Description of the symptoms of all the psychoses listed in this chapter are from a consensus of the Statistical Guide and the other authors on psychiatry mentioned in the Bibliography.

fifty and sixty-five. Symptoms may include all or part of the following: mental fatigue, dizziness, irritability, anxiety, reduced work capacity, inability to concentrate, childishness, emotional instability, obstinacy, and memory disturbances. There may be outbursts of excitability and delirious and anxious states. There is neglect of personal appearance and failure to bathe. Coordination becomes poor; delusions, particularly of a persecutory nature, appear; speech is slower and poorly pronounced. Defective judgment and lack of inhibitions in a sexual direction are common. The first symptom is frequently an apoplectic stroke.

Senile psychoses seem to be due to a progressive dissolution of highly specialized nerve tissue during the senile period of life. Why this psychosis occurs in some persons and not in others is still an unanswered question. It is suggested by some psychiatrists that this may be due to less durable neurones. There is a self-centering of interest, a tendency to reminisce, and an inability to assimilate new experiences. Recent memory is poor. The onset of the disease is gradual. Symptoms include lessened ambition and activity and interest. There is resentfulness of the young, affections are dulled, and a general distrust and prying ensues. Personal appearance is neglected and toilet habits are careless. In general, there is an exaggeration and caricature of previous personality

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and personality patterns. Finally, the patient loses all ability to remember recent events and lives further and further back in the past, often in distant childhood.

Senile deterioration is a further disorganization of the personality in the senile person. There are defects of attention and concentration and often misidentification of persons. Persons having this psychosis are restless, wander about, and may have marked irritability and assaultiveness. They may have persistent or fleeting delusions. The deterioration may progress to a vegetative existence.

Senile presbyophrenic psychosis is characterized by a defect of memory and confabulation. The previous, usually warm and friendly, personality is maintained but there is a tendency to vacillate between friendliness and irritability. These persons are quite talkative and appear to be alert but are out of contact with their environment. They are constantly busy in a restless, unproductive or destructive manner.

Senile paranoids are usually persons who throughout life have been dissatisfied and have used projection and the like as defense mechanisms. There are always delusions, usually persecutory, but there may be no memory loss. Hallucinations and delusions are more common than in any of the other senile psychoses. Consciousness and orientation most frequently remain undisturbed.

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brain atrophy and pronounced neurofibril lesions. Symptoms vary but may include rapid mental deterioration, memory defects, restlessness, disorientation, confusion, delirium, and disturbances of speech such as aphasia, paraphasia, lococlonia and iterative repetition. Restless, plucking movements are common. Spasticity and epileptiform seizures occur in advanced cases. There are hallucinations and delusions. Since there are cases of this disease in the forties, it is sometimes termed as pre-senile.

All the above psychoses are held to be associated with old age and are so grouped in this report.

Alcoholic psychoses are those psychoses that are due to addiction to intoxicating beverages. Since alcoholism may be a symptom of another psychosis, an accurate diagnosis is imperative here. There is sudden excitation or twilight states, often with a misconception of a situation. There are delusions and hallucinations and marked emotional reactions such as anxiety or rage. Attacks may last a few minutes or some hours or days. Amnesia for the attack follows.

Korsakoff's psychosis is sometimes known as chronic delirium as contrasted with the acute delirium tremens. In this syndrome, however, after the acute state there is a marked defect of retention and confabulation. Polyneuritis is frequently, but not always, part of the syndrome and may leave permanent physical defects.

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Alcoholic paranoids are so diagnosed when they show as a predominant part of their psychosis a delusional content. This is usually associated with delusions of infidelity.

Alcoholic deterioration is the diagnosis for those chronic alcoholics who show signs of ethical and moral deterioration. There is emotional blunting and evidences of organic memory defects.

Psychoses due to, or associated with, infection include those psychoses due to syphilis. The only large group in this category is luetic meningo-encephalitis (general paresis). Onset is usually gradual. Headache and dizziness, loss of memory for recent events, confusion, delirium, clouding of consciousness and sometimes stupor are present. The psychosis is usually accompanied by delusions of grandeur, involving the possession of fantastic sums of money, a feeling of well-being and a lack of courtesy. In later stages disorientation and confusion are complete. Other types of syphilitic psychoses are meningo-vascular syphilis and syphilis of the central nervous system.

Psychoses due to convulsive disorders (epilepsy) include epileptic deterioration which is characterized by mental dullness, slowness of memory and association, irritability or apathy. There may also be paranoid delusions and hallucinations.

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deep confusion or bewilderment immediately preceding, following or accompanying a convulsive attack. There may be fear or religious exultation, hallucinations and violent outbreaks and ecstasy. In its later stages there is obvious deterioration and it is then labeled deterioration.

Psychoses due to a drug or other exogenous poison are limited to mental disorders of a psychotic nature caused by a metal (long exposure to a metallic poisoning), by gas (carbon monoxide, illuminating gas, and automobile exhaust), by opium or a derivative and by excessive use of other drugs (such as cocaine, bromides, chloral, acetanilide, phenacetin, sulphonal, trional and proprietary combinations).

The psychoses due to disturbance of circulation include cerebral embolism, cardio-renal disease and psychoses with cerebral arteriosclerosis. The last named has been included among those associated with psychoses of old age since it usually falls among the aged. Cerebral embolism is also included among the old age psychoses although it is a very rare occurrence.

Cardio-renal disease contains those psychotic disturbances, delirium and temporary periods of confusion, experienced by persons with heart disease. It usually occurs at night, during stages of decompensation, and is accompanied by fearful hallucinations. Concentration and memory are impaired and there may be a marked fluctuation in mental clearness. Also placed in this classification are

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psychotic changes due to both acute and chronic kidney disease. Such mental changes occur in five to ten per cent of persons with serious cardio-renal or heart disease.

The psychoses due to disturbances of metabolism, growth, nutrition or endocrine function usually includes the senile psychoses, deterioration, and presbyophrenia and senile paranoia, but for the purpose of analysis in this study these psychoses are listed among psychoses usually associated with old age. The others in this category are in the involutional psychoses and psychoses with other somatic disease.

Involutional melancholia occurs as a depression in middle life and later years and is usually associated with the menopause. In women this psychosis makes its appearance in the middle and late forties and in men in the late fifties. There is an agitation, uneasiness, insomnia and most frequently a self-condemnatory attitude and hypochondriasis. We find that such persons have usually been inhibited, worrisome, intolerant, reticent, sensitive, frugal, meticulous, stubborn, excessively moral, lacking in humor, self-punishing and with narrow interests. There has usually been an underlying feeling of insecurity.

Involutional paranoid diagnoses are given to those persons having an involutional psychosis in which the dominant characteristic is the paranoid delusions. These take the form of persecution, suspiciousness and misinterpretation.

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Involutional paranoid psychosis are given to those persons having an involutional psychosis in which the dominant characteristic is the paranoid delusions. These take the form of persecution, suspiciousness and misinterpretation.

In their pre-psychotic life they had a personality somewhat similar to that of the involuntional melancholic but tended to use defensive reactions, criticism of others, jealousy, and a projection of blame.

Other involuntional psychoses are so classified when they do not fit the behavior pattern of either the paranoid or the melancholic. There is some dispute, particularly in the classification of this psychotic group, as to whether, it should not be listed under the psychogenic psychoses.

The question as to whether a distinct place in any classification of mental diseases should be accorded to involuntional melancholia (or the other involution-psychoses) has been the occasion of much discussion. Many psychiatrists have considered that this affective disturbance should be looked upon as a modified manic-depressive psychosis occurring at a particular physiological epoch. In addition, however, to its affective characteristics there are special physiological and psychological factors of such dynamic importance and so peculiar to that period of the individual's life during which the mental disturbance occurs that separate consideration is justified.

...The present official classification of mental disorders includes the involuntional psychoses among those due to disturbances of metabolism, growth, nutrition of endocrine function. While changes at the somatic level of integration undoubtedly contribute directly or indirectly to the disorders of personality included among the involuntional psychoses yet the author considers that factors other than disturbances in these functions are more important in their production.¹

1. Arthur P. Noyes, Modern Clinical Psychiatry, p. 301.

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The final psychosis classified as due to disturbances of metabolism, growth, nutrition or endocrine function is psychoses with other somatic disease. This includes all psychoses connected with the development of a somatic disease excluding those otherwise specified; such as psychoses with infectious diseases and post-infectious psychoses.

Psychoses with intracranial neoplasm is diagnosed when a psychosis develops during the growth of a brain tumor whether the tumor is primary or secondary.

The last of the diseases listed as having an organic foundation is Huntington's Chorea. This is a hereditary disease transmitted in a single dominant gene. No one has ever been known to have this disease who could not trace it to his direct forebears. Onset is insidious between the ages of thirty and forty-five. There is an emotional deterioration, an ethical blunting and an impairment of memory, attention and judgment. Choreiform movements appear first in the upper extremity, neck and face. There are all types of bizarre, involuntary movements of a clumsy, irregular, jerky, stretchy nature.

The next classification is that of disorders of psychogenic origin or without clearly defined tangible cause or structural change. This has six major classifications: manic depressive psychoses, dementia praecox (schizophrenia), paranoia, paranoid conditions, psychoses with psycho-

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pathic personality and psychoses with mental deficiency. It is with these psychoses of psychogenic origin that a study of this nature must be primarily concerned. For if factors other than physical illness, i.e., social, economic and other environmental influences, are determinative of the rate of psychoses in any given neighborhood area, we should expect to find the effects in this group of psychoses. This would be true by definition, since functional psychoses are generated by emotional conflicts and organic psychoses arise from bodily changes independent of an individual's feelings or environmental pressures.

The manic-depressive psychoses are known as affective psychoses since affect is so dominant in the illness. There is still much dispute among psychiatrists as to whether there is a hereditary factor involved, with many asserting there is and others believing that it is merely the case of a cyclothymic family environment. Whichever is the case, there is as yet no evidence as to how this mental disease is transmitted by hereditary genes. The most common incidence seems to be in those persons of a pyknic (Sheldon's Endomorph) physique, short and stocky. Their temperament is described as cyclothymic and extraverted (Sheldon's visceratonic).

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swing from a highly elated, excited period, to a deep depression and then back again. The patient may remain in either of these phases from several days to many years. Although the affect is cyclical, the individual may not necessarily complete the entire swing. He may merely enter into periodic depressions or periodic phases of mania. Since Kraepelin recognized the fact that both the mania and the depression are merely different aspects of the same illness, there has been a growing tendency to believe that there is an underlying depression in even the elated stage.

Manic depressive psychosis, manic, is characterized by an elation of spirits, overtalkativeness, irritability, increased motor activity, extreme over-activity, and a flight of ideas. There may be transitory swings to depression. The patient requires little sleep and is constantly in motion. Clinically can be seen the tendency towards over-decoration, i.e., the use of too much make-up, gaudy clothing and the indiscriminate use of jewelry. There may be delusions of grandeur with many grandiose schemes. These patients become prolific writers, addressing very lengthy letters to the most important personages. Clifford W. Beers gives an excellent description of the over-activity of the manic.¹

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The manic depressive, depressed, demonstrates the depths of despair and depression. There is a mental and motor retardation. The depression is at times of an agitated type in which the patient sobs and cries pitifully, blaming himself for all types of misdeeds. But the patient can merely remain immobile, without moving or speaking for long periods of time. The retardation of movement and the feeling of the uselessness of living in the individual often makes it difficult merely to keep the patient alive. As the patient leaves the depths of depression and swings into more activity, there is a constant danger of suicide. Persons who have depressive episodes without a manic interlude, are found usually to have been timid, insecure, lacking in sociability, rigid in ideas, and worrisome, prudish and over-conscientious. It is believed that many persons enter into a mild depression characterized by fatigue, low spirits and somatic complaints, that is not recognized and passes almost unnoticed. On the other hand, the most intense depression is actually a depressive stupor.

The manic depressive, circular, swings completely from the manic to the depressive phase and vice versa without a period of recovery or freedom from symptoms.

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These persons seem unable to understand their environment or they misinterpret it. As a result they often act in a bizarre manner and display strange behavior.

Manic depressive, mixed, applies to those cases in which there is a combination of both manic and depressive features. Often included in this group are the agitated depressions, and manic stupors and the unproductive mania.

The majority of manic depressives are women. The disease may run for a short period to many years. The prognosis, however, is usually good.

The classification dementia praecox (schizophrenia) is sub-divided into five groups: simple, hebephrenic, catatonic, paranoid and mixed. If there is any one single characteristic that runs through all schizophrenic types, it is withdrawal and regression to an earlier form of behavior. Whereas in the "normal" individual there is a synthesis and blending of the cognitive, conative, affective and constitutional portions of the personality to form an harmonious whole, in the schizophrenic there is a splitting of the personality into its many segments. With such a disruption, there is an inappropriateness of mood, a deterioration of thought and an unadaptiveness of behavior. The term "dementia praecox," the original designation for this disease, is no longer widely used since it connotes a deterioration of brain tissue starting in early life which

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is now known not to be an accurate description of this disease. The individual withdraws from society, prefers to be alone, and shows a slight depression. Intensity of emotional life and its variety become dulled. He seems to be preoccupied, loses ambition and interest, becomes taciturn, and is easily offended, believing others do not like him and talk about him. His suspicions and misinterpretations cause him to move from place to place. He becomes worried about his physical health and shows great concern about diet and exercise "to build himself up." This is the picture of the onset of schizophrenia which is gradual for all except possibly catatonia. It should be remembered that, although the various types are separated for purposes of classification, a person may move from one type to another and frequently does. Psychoanalysts speak of the whole process as one of narcissistic withdrawal and regression.

Schizophrenia, simple type, is marked by disturbances of emotion, interest and activity. There may be fleeting hallucinations but there are seldom any delusions. Emotions are childish and a loss of appreciation of esthetic and moral considerations takes place. There is no sustained effort and tasks are not completed. Common among this group are the tramps, vagrants, prostitutes or delinquents.

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Schizophrenia, hebephrenic type, is marked by hallucinations in great frequency with fragmentary delusions in the form of phantasy. The patient enjoys an autistic life and is practically inaccessible. Emotional reactions are shallow, speech is frequently incoherent, mannerisms are constantly present, and silly, incongruous, regressive features are prevalent. There are stereotyped movements, grinning and laughing and the coining of new words, phrases and speaking in rhyme. In his advanced stages the hebephrenic shows the most marked personality disintegration of the schizophrenics.

Schizophrenia, catatonic type, displays as its prominent features negativism or automatism. There may be a swift change in phases. Onset may be acute, often after an emotionally disturbing incident, and prognosis is more favorable than for the other types for recovery with personality reintegration. It may pass over into hebephrenia or paranoid types and permanently split the personality. In catatonic stupor the patient becomes uncommunicative and often mute. It is often preceded by depression, dreaminess, preoccupation, lack of interest and emotions. A rigid posture may be assumed, and he will resist any effort to move him from this attitude. He may maintain this position for months, refusing to eat or dress. He may become incontinent, disregarding all personal cleanliness. Gestures and grimacing are frequently present. He may resist

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 to move him from this attitude. He may maintain this posi-
 tion for months, refusing to eat or dress. He may become
 incontinent, disregarding all personal cleanliness. Gas-
 tritis and grunting are frequently present. He may resist

even the most painful stimuli. Flexible or rigid catalepsy may be present. Yet the events transpiring about him usually register with the patient.

Catatonic excitement expresses an impulsive over-activity without emotion and uninfluenced by the environment. It is usually incoherent, purposeless, stereotyped, and confined in space to the observer. Movements are purposeful from the viewpoint of the patient's inner motivations. He may become assaultive or destroy his clothing. Hallucinations are terrifying or ecstatic or mystical.

Schizophrenia, paranoid type, presents numerous and illogical delusions and hallucinations. Delusions of persecution are most prominent and tend to display the psychological needs of the individual. There seems to be a strong homosexual component in these persons. The critical faculties are suspended, and there may be only apathy to the delusions that formerly aroused aggressiveness. The prognosis is fairly good, second only to catatonia.

Schizophrenia, mixed, is used to classify other types of schizophrenia that do not seem to fall into the four main categories. This may be due to unusual characteristics in the particular disease or to the mixture of symptoms and ideational content of two or more of the others.

Paranoia is the reaction of the personality by the mechanisms of projection or of compensation and does not

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Paranoia is the reaction of the personality by the mechanisms of projection or of compensation and does not

include affect blunting or impairment of conation and associative processes. Delusions are systematized and readily explained. Emotional reactions are consistent with the ideas expressed and accompany delusions of suspicion and persecution. The elaboration is logical when the patient's basic premise is accepted, often based on an actual incident that has been misinterpreted. These persons may be dangerous since they are capable of taking action against their persecutors. Intelligence is usually high and hallucinations rare. When pre-psychotic, the individual was probably sullen, irritable, stubborn, moody, and unable to get along with others. Cases of pure paranoia are very rare, and psychiatrists doubt that a true case of paranoia ever recovers.

Paranoid condition serves as the diagnosis for those persons falling between paranoia and paranoid schizophrenia in regard to the preservation of the personality, coherence of thinking and abnormalities of behavior. They have delusions, usually persecutory, more illogical and misinterpretive than in the case of paranoia. Hallucinations may be prominent. Primarily, the delusions may approximate those of the paranoid schizophrenia, but even after many years there is not the deterioration, lack of interest or withdrawal of this category.

Psychoses with psychopathic personality describes

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Psychoses with psychopathic personality describes

those cases that show abnormal reactions, emotional and volitional in nature. Psychopathic personalities are those childish individuals lacking in emotional maturity and judgment, and showing an inability to learn from experience. They are emotionally unstable with no consideration of others and are prone to impulsive actions. In psychosis these people demonstrate an episodic character. The psychoses are marked by irritability, excitement, depression, paranoid stages and transient confused states. Prison psychosis belongs in this group. Psychopaths with other psychoses are listed under one of the other headings.

Psychoses with mental deficiency catalogues mental defectives who also have episodic attacks. These include excitement with depression, paranoid trends or hallucinations. Mental defectives suffering from schizophrenia, manic depression or one of the organic psychoses are listed under one of these.

For those remaining psychoses in which a clear cut diagnosis cannot be made there is left the classification of undiagnosed psychoses. This may be due to the lack of an adequate psychiatric or social history, the inaccessibility of the patient, or too short a period of observation, or a really obscured clinical picture that defies placement in any of the regular categories.

Psychoses due to trauma, post-encephalitis psychoses,

2. A. H. Maslow and H. A. Mittleman, *Principles of Abnormal Psychology*, p. 300.

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Psychoses due to trauma, post-encephalitic psychoses,

and Parkinson's syndrome were found to be so rare in this study that they were not described in this chapter, although they are listed where they did occur under their proper classification within the organic psychoses. This is also true of Wernicke's syndrome under the alcoholic psychoses.

It is to be understood that the classification used in these pages is that of the American Psychiatric Association for statistical purposes. Many psychiatrists, particularly the psychoanalysts, would include among the psychogenic psychoses many diseases here listed as strictly organic. This would be particularly true of involutional melancholia and the other involutional ailments as noted on page 49. Many of the diagnoses of psychoses associated with old age would also be considered to have other than strictly organic bases. Certainly they would not be content with the quick filing of the alcoholics in the organic file cabinet. And even with the general paralytics, some question is raised by the fact that all syphilitics do not develop luetic meningo-encephalitis, and there is no known reason why some do and some do not. Indeed, the number of syphilitics who develop this psychosis is about the same percentage as the number of other persons in the community who develop a mental illness.¹

1. A. H. Maslow and Bela Mittelman, Principles of Abnormal Psychology, p. 500.

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While a case could be made for each side in this controversy, the writer feels that because of the records used for this study a strict adherence to the qualifications laid down in the regular statistical guide is essential.

In giving all the psychoses their proper incidence, addresses of first admissions to the Rhode Island Hospital for Mental Diseases were plotted by census tracts and then transformed to neighborhood areas. The first consideration was for the city as a whole. Tables III. through XII. shows the distribution of the 1,385 cases by diagnoses and neighborhood areas for the ten year period. Diagnoses are grouped according to major classifications with those considered to be of an organic basis by the American Psychiatric Association listed first in Tables III. - IX., and those of a psychogenic origin in the latter part in Tables X. - XII.

This division presents 1,385 cases or 67.9% as having a somatic origin and 605 cases or 32.1% as being functional in nature. The biggest single group of psychoses are those associated with old age. There are 781 of these cases, 41.4% of the total number of admissions. Psychosis with cerebral arteriosclerosis seems to be the largest single enemy of the aged. It accounts for 415 admissions, 13% of those admitted in this group. Senile psychosis provides 154 cases, senile deterioration 118, senile dementia 83.

While a case could be made for each side in this controversy, the writer feels that because of the records used for this study a strict adherence to the qualifications laid down in the regular statistical guide is essential.

CHAPTER V.

DISTRIBUTION OF THE PSYCHOSES BY SOCIO-
ECONOMIC NEIGHBORHOOD AREAS IN PROVIDENCE.

In giving all the psychoses their proper incidence, addresses of first admissions to the Rhode Island Hospital for Mental Diseases were plotted by census tracts and then transformed to neighborhood areas. The first consideration was for the city as a whole. Tables III. through XII. shows the distribution of the 1,885 cases by diagnoses and neighborhood areas for the ten year period. Diagnoses are grouped according to major classifications with those considered to be of an organic basis by the American Psychiatric Association listed first in Tables III. - IX., and those of a psychogenic origin in the latter part in Tables X. - XII.

This division presents 1,280 cases or 67.9% as having a somatic origin and 605 cases or 32.1% as being functional in nature. The biggest single group of psychoses are those associated with old age. There are 781 of these cases, 41.4% of the total number of admissions. Psychosis with cerebral arteriosclerosis seems to be the largest single enemy of the aged. It accounts for 414 admissions, 53% of those admitted in this group. Senile psychosis provides 154 cases, senile deterioration 115, senile paranoid 65,

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TABLE III.

FIRST ADMISSIONS TO THE RHODE ISLAND STATE HOSPITAL
FOR MENTAL DISEASES OF PSYCHOTICS FROM PROVIDENCE
BY DIAGNOSES AND NEIGHBORHOOD AREAS, 1938-1948

Psychoses Associated With Old Age						
Neighborhood Areas	Cer. Art.	Senile Psych.	Senile Deter.	Senile Par.	Senile Presb.	Alzheimer's Disease Total
Downtown	40	26	19	6	1	2 94
Camp	12	5	2	0	0	1 20
East Side	18	8	6	2	0	0 34
Elmhurst	8	2	3	1	0	0 14
Elmwood	23	13	13	6	1	4 60
Federal Hill	35	4	6	4	0	2 51
Fox Point	13	4	2	1	1	0 21
Lower East Side	12	11	3	3	3	1 33
Manton	8	1	1	0	0	1 11
Mount Pleasant	15	7	7	2	1	0 32
North End	9	2	1	1	0	0 13
Olneyville	22	10	9	2	0	1 44
Silver Lake	14	6	4	2	0	0 26
South Providence	57	27	14	14	2	1 115
Wanskuck	13	3	4	1	0	1 22
Washington Park	12	5	1	1	0	0 19
West End	44	7	6	10	1	1 69
West Elmwood	37	7	6	6	2	2 60
Total	414	154	115	65	16	17 781

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senile presbyophrenia 16 and Alzheimer's disease 17.

The next major classification is that of psychoses due to intoxication. For the ten year period there were 120 first admissions diagnosed as psychotic due to the use of alcohol, 6.2% of all first admissions. Of this group, the Korsakoff's syndrome contributed 46, alcoholic deterioration 27, paranoid traits 6, Wernicke syndrome 1, and alcoholic psychosis 40. This last grouping refers to those psychoses due to intoxication not displaying any of the syndrome characteristics above and therefore needing a separate classification.

In Table V., (page 66) we have those admissions, psychotic in nature, due to, or associated with infection. At this hospital, syphilis is the biggest single contributor in its three classes, meningo-encephalitis, commonly known as general paresis; the meningo-vascular type (cerebral syphilis); and syphilis of the central nervous system. The three, meningo-encephalitis, 102 cases, meningo-vascular type, 2, and syphilis of the central nervous system, 3, contribute 107 of the 110 cases in this category; epidemic encephalitis produced only 3 cases of psychoses in ten years and the other types usually included in this category produced no admissions. The classifications as a whole accounted for 5.6% of the 1,885 cases.

Psychoses due to a drug or other exogenous poison have little effect upon the rate of psychoses, as seen in Table

senile presbyopia 18 and Alzheimer's disease 19.

The next major classification is that of psychoses due to intoxication. For the ten year period there were 180 first admissions diagnosed as psychotic due to the use of alcohol, 8.2% of all first admissions. Of this group, the Korsakoff's syndrome contributed 46, alcoholic delirium 27, paranoid traits 5, Wernicke's syndrome 1, and alcoholic psychosis 40. This last grouping refers to those psychoses due to intoxication not displaying any of the syndrome characteristics above and therefore needing a separate classification.

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TABLE IV.

FIRST ADMISSIONS TO THE RHODE ISLAND STATE HOSPITAL
FOR MENTAL DISEASES OF PSYCHOTICS FROM PROVIDENCE
BY NEIGHBORHOOD AREAS AND DIAGNOSES, 1938-1948

Psychoses Due To Intoxication						
Neighborhood Areas	Alcoholic Psych.*	Korsakoff's Syndrome	Wernicke Syndrome	Alco. Deter.	Alco. Par.	Total
Downtown	16	14	0	5	2	37
Camp	1	4	0	0	0	5
East Side	2	0	0	0	1	3
Elmhurst	0	1	0	1	0	2
Elmwood	1	3	0	0	0	4
Federal Hill	2	0	0	1	0	3
Fox Point	0	3	0	1	0	4
Lower East Side	1	3	0	0	1	5
Manton	0	0	0	0	0	0
Mount Pleasant	3	0	0	3	0	6
North End	0	1	0	0	0	1
Olneyville	4	2	1	2	0	9
Silver Lake	0	1	0	1	0	2
Smith Hill	2	2	0	1	0	5
South Providence	3	2	0	5	2	12
Wanskuck	0	0	0	0	0	0
Washington Park	0	4	0	0	0	4
West End	3	4	0	6	0	13
West Elmwood	2	2	0	1	0	5
Total	40	46	1	27	6	120

*Other than those specified in different headings.

TABLE V.

FIRST ADMISSIONS TO THE RHODE ISLAND STATE HOSPITAL
FOR MENTAL DISEASES OF PSYCHOTICS FROM PROVIDENCE
BY NEIGHBORHOOD AREA AND DIAGNOSES, 1938-1948

Psychoses Due To, Or Associated With Infection					
Neighborhood Areas	Meningo-Vascular	Syphilis Of C.N.S.	Epidemic Encephalitis	Meningo-* Encephalitis	Total
Downtown	0	0	0	20	20
Camp	0	0	0	6	6
East Side	0	0	0	1	1
Elmhurst	0	0	0	1	1
Elmwood	0	0	0	5	5
Federal Hill	1	1	0	9	11
Fox Point	0	0	0	4	4
Lower East Side	0	0	0	2	2
Manton	0	0	0	0	0
Mount Pleasant	0	0	1	5	6
North End	0	0	1	1	2
Olneyville	0	0	0	3	3
Silver Lake	0	0	0	1	1
Smith Hill	0	1	0	5	6
South Providence	0	0	0	14	14
Wanskuck	0	0	0	2	2
Washington Park	0	0	0	4	4
West End	1	1	0	13	15
West Elmwood	0	0	1	6	7
Total	2	3	3	102	110
*General Paresis					

VI., (page 68). They total only 8 cases, seven due to drugs, or less than 1% of the cases. The same is true of psychoses due to trauma with 6 cases, also giving less than one half of 1% of the ten year total.

Psychoses due to disturbance of circulation, Table VII., (page 69) primarily cardio-renal disease, accounted for 31 cases or 1.6% of the cases. It is to be remembered in this regard that the 414 cases of cerebral arteriosclerosis are customarily included under this heading and would swell the total to 445, 23.6% of all admissions.¹ Other somatic diseases, totaling 37 cases, refers to those cases of psychosis developing in connection with an organic disease and not otherwise classified in the statistical guide, and it accounts for 1.9% of the cases. Other metabolic diseases refers to disturbances of metabolism and provides only 8 cases.

Also included in this classification are the involutional psychoses. Involutional melancholia has 57, involutional paranoid 22 and other involutional psychoses 5, a total of 84, 4.4% of first admissions. The writer wishes to point out once again as mentioned in Chapter IV. that there is serious doubt as to whether the involutional psychoses belong in this classification.²

1. Pages 47, 48, 65.

2. Pages 51, 52.

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Also included in this classification are the involutional psychoses. Involutional melancholia has 27, involutional paranoid 22 and other involutional psychoses 5, a total of 54, 4.4% of first admissions. The writer wishes to point out once again as mentioned in Chapter IV. that there is serious doubt as to whether the involutional psychoses belong in this classification.²

1. Pages 47, 48, 82.

2. Pages 81, 82.

TABLE VI.

FIRST ADMISSIONS TO THE RHODE ISLAND STATE HOSPITAL
FOR MENTAL DISEASES OF PSYCHOTICS FROM PROVIDENCE
BY NEIGHBORHOOD AREAS AND DIAGNOSES, 1938-1948

Neighborhood Areas	Psychoses Due To A Drug Or Other Exogenous Poison			Psychoses Due To Trauma	
	Metal	Gas	Drug	Total	
Downtown	0	0	1	1	0
Camp	0	0	0	0	0
East Side	0	0	0	0	1
Elmhurst	0	0	0	0	0
Elmwood	0	0	2	2	0
Federal Hill	0	0	0	0	0
Fox Point	0	0	0	0	0
Lower East Side	0	0	0	0	0
Manton	0	0	0	0	0
Mount Pleasant	0	0	0	0	0
North End	0	0	1	1	0
Olneyville	0	0	0	0	2
Silver Lake	0	0	2	2	0
Smith Hill	0	0	0	0	0
South Providence	0	0	0	0	1
Wanskuck	0	0	0	0	0
Washington Park	0	0	0	0	0
West End	0	1	1	2	1
West Elmwood	0	0	0	0	0
Total	0	1	7	8	6

TABLE VII.
FIRST ADMISSIONS TO THE RHODE ISLAND STATE HOSPITAL
FOR MENTAL DISEASES OF PSYCHOTICS FROM PROVIDENCE
BY NEIGHBORHOOD AREAS AND DIAGNOSES, 1938-1948

Neighborhood Areas	Psychoses Due To Disturbance Of Circulation			Psychoses Due To Disturbance Of Metabolism, Growth, Nutrition Or Endocrine Function			Other Som. Diseases		Total ²
	Inv. Psych.	Inv. Mel.	Inv. Par.	Total Inv.	Other Met.	Total Inv.	Other Diseases		
Downtown	7	1	3	2	6	1	5	12	
Camp	1	0	3	1	4	0	2	6	
East Side	0	0	1	1	2	0	0	2	
Elmhurst	0	1	3	0	3	1	1	5	
Elmwood	0	2	2	1	4	1	3	8	
Federal Hill	2	0	3	0	3	0	3	6	
Fox Point	0	0	1	0	1	0	1	2	
Lower East Side	0	3	0	0	3	0	1	4	
Manton	0	2	1	1	3	0	0	3	
Mount Pleasant	0	2	1	1	3	0	0	3	
North End	0	3	0	0	3	0	0	3	
Olneyville	1	3	2	2	5	0	1	6	
Silver Lake	0	3	0	0	3	0	0	3	
Smith Hill	2	3	3	3	7	0	2	9	
South Providence	4	7	5	12	1	1	8	21	
Wanskuck	3	4	0	5	3	0	1	6	
Washington Park	2	2	1	3	3	0	0	3	
West End	6	10	4	14	0	0	7	21	
West Elmwood	3	2	0	3	1	1	1	5	
Total	31	57	22	84	8	36	128		

1. Involuntional psychoses not otherwise classified.
2. Total of Involuntional, Other Metabolic, and Other Somatic Diseases.

1. Involutional psychoses not otherwise classified.

2. Total of Involutional, Other Metabolic, and Other Somatic Diseases.

The 129 cases in this group of psychoses present 6.8% of the admissions. For statistical purposes this group normally includes the senile psychoses, senile deterioration, senile presbyophrenia, senile paranoid and Alzheimer's disease - all included in this report under psychoses associated with old age. If the 367 cases so diagnosed¹ were included, we would have a gross figure of 496 cases and this 26.3% would represent the largest single group of psychoses.

Those cases of psychosis due to convulsive disorders are divided into three sub-groups, clouded states 12, epileptic deterioration 16, and others 7 for a total of 35 or 1.8%. Psychoses due to an intracranial neoplasm (tumor of the brain) provide 13 cases or less than 1%. (Table VIII., page 71).

Table IX., (page 72) indicates that only 6 cases in ten years were of an unknown or hereditary cause associated with organic origins. Forty-one cases fell into the undiagnosed psychoses for a total of 2.1%.

The next division is of disorders of psychogenic origin, the so-called functional psychoses. Divided as it is in the official classification, it represents 605 cases, easily the greatest single contributor to mental disease of a psychotic nature with 32.1%. It seems probable that psychogenic causes are responsible for some of the other psychotic states in whole or in part, and here we have our

1. Page 65.

The 128 cases in this group of psychoses present 8.8% of the admissions. For statistical purposes this group normally includes the senile psychoses, senile dementia, senile presenile dementia, senile paranoid and Alzheimer's disease - all included in this report under psychoses associated with old age. If the 387 cases so diagnosed¹ were included, we would have a gross figure of 495 cases and this 26.3% would represent the largest single group of psychoses. Those cases of psychosis due to convulsive disorders are divided into three sub-groups, grouped under 12, epileptic deterioration 16, and others 7 for a total of 35 or 1.8%. Psychoses due to an intracranial neoplasm (tumor of the brain) provide 13 cases or less than 1% (Table VIII., page VI.).

Table IX., (page V2) indicates that only 8 cases in ten years were of an unknown or hereditary cause associated with organic origins. Forty-one cases fell into the undiagnosed psychoses for a total of 2.1%.

The next division is of disorders of psychogenic origin, the so-called functional psychoses. Divided as it is in the official classification, it represents 603 cases, easily the greatest single contributor to mental disease of a psychotic nature with 32.1%. It seems probable that psychogenic causes are responsible for some of the other psychotic states in whole or in part, and here we have our

TABLE VIII.

FIRST ADMISSIONS TO THE RHODE ISLAND STATE HOSPITAL
FOR MENTAL DISEASES OF PSYCHOTICS FROM PROVIDENCE
BY NEIGHBORHOOD AREAS AND DIAGNOSES, 1938-1948

Neighborhood Areas	Psychoses Due To			Psychoses Due To	
	Clouded States	Ep. Det.	Others Total	Convulsive Disorders*	New Growth
					Intracranial Neoplasm
Downtown	3	0	1	4	1
Camp	2	0	0	2	1
East Side	0	1	0	1	0
Elmhurst	1	0	1	2	0
Elmwood	1	3	1	5	1
Federal Hill	0	0	0	0	2
Fox Point	1	0	0	1	1
Lower East Side	1	2	0	3	0
Manton	0	1	0	1	0
Mount Pleasant	1	0	1	2	1
North End	0	0	0	0	0
Olneyville	0	2	0	2	1
Silver Lake	0	0	0	0	0
Smith Hill	1	1	0	2	0
South Providence	0	3	2	5	1
Wanskuck	0	1	1	2	1
Washington Park	0	0	0	0	2
West End	1	2	0	3	1
West Elmwood	0	0	0	0	0
Total	12	16	7	35	13
*Epilepsy					

TABLE IX.

FIRST ADMISSIONS TO THE RHODE ISLAND STATE HOSPITAL
FOR MENTAL DISEASES OF PSYCHOTICS FROM PROVIDENCE
BY NEIGHBORHOOD AREAS AND DIAGNOSES, 1938-1948

Neighborhood Areas	Psychoses Due To			Undiagnosed Psychoses	
	Unknown Or Hereditary Cause*	Parkinson's Syndrome	Huntington's Chorea	Post Partum	Total
Downtown	0	0	0	0	0
Camp	0	0	0	0	0
East Side	0	0	0	0	0
Elmhurst	0	0	0	0	0
Elmwood	0	0	1	0	1
Federal Hill	0	0	0	0	0
Fox Point	0	0	0	0	0
Lower East Side	0	0	0	0	0
Manton	0	0	0	0	0
Mount Pleasant	0	0	0	0	0
North End	0	0	0	0	0
Olneyville	0	0	0	0	0
Silver Lake	1	0	0	0	1
Smith Hill	0	0	0	0	0
South Providence	0	0	1	0	1
Wanskuck	1	0	0	1	2
Washington Park	0	0	0	0	0
West End	0	0	0	0	0
West Elmwood	0	0	0	0	0
Total	2	3	1	6	41

* Associated with organic causes.

greatest challenge to mental health. Here, too, lies the field in which correctional measures may be applied and thus it is of vital interest to social workers.

The first major division of this group is that of the manic depressive psychoses, (Table X., page 74). It in turn is comprised of 5 sub-groups: manic 31 cases, depressed 73, circular 2, perplexed 3, and mixed 12. This group of 121 comprises 6.4% of the 1,885 cases with the depressed individuals significantly larger with 60.3% of the manic depressives.

In dementia praecox, (Table XI., page 75) now more generally accepted as schizophrenia, we have the largest group of psychogenic psychotics. Its 395 cases make up 65.3% of the classification and 20.8% of the total first admissions. The largest branch of schizophrenia is the paranoid with 161 cases, followed by the simple type 96, catatonic 67, hebephrenic 44 and mixed types 27. These figures are of particular importance since the catatonics forming 17% of schizophrenia, and the paranoids with 40.7% have the best prognosis in that respective order. Thus 57.7% of the schizophrenics should have a fairly favorable chance of recovery.

Table XII., (page 76) offers the remaining classifications of sub-types of disorders of psychogenic origin. The rare paranoia submitted only 3 cases, less than one every three years, but the paranoid states had 41 cases,

greatest challenge to mental health. Here, too, lies the field in which correctional measures may be applied and thus it is of vital interest to social workers.

The first major division of this group is that of the manic depressive psychoses, (Table X., page 74). It in turn is comprised of 5 sub-groups: manic 31 cases, depressed 73, circular 2, paralytic 3, and mixed 12. This group of 121 comprises 8.4% of the 1,385 cases with the depressed individuals significantly larger with 60.3% of the manic depressives.

In dementia praecox, (Table XI., page 75) now more generally accepted as schizophrenia, we have the largest group of psychogenic psychotics. Its 395 cases make up 28.5% of the classification and 20.8% of the total first admissions. The largest branch of schizophrenia is the paranoid with 161 cases, followed by the simple type 96, catatonic 67, hebephrenic 44 and mixed types 27. These figures are of particular importance since the catatonics forming 17% of schizophrenia, and the paranooids with 40.7% have the best prognosis in that respective order. Thus 57.7% of the schizophrenics should have a fairly favorable chance of recovery.

Table XII., (page 76) offers the remaining classifications of sub-types of disorders of psychogenic origin. The rare paranooids submitted only 3 cases, less than one every three years, but the paranooids states had 41 cases,

TABLE X.

FIRST ADMISSIONS TO THE RHODE ISLAND STATE HOSPITAL
FOR MENTAL DISEASES OF PSYCHOTICS FROM PROVIDENCE
BY NEIGHBORHOOD AREAS AND DIAGNOSES, 1938-1948

Disorders Of Psychogenic Origin*					
Manic Depressive Psychoses					
Neighborhood Areas	Manic	Depressed	Circular	Perplexed	Mixed Total
Downtown	4	14	1	1	0 20
Camp	1	4	1	0	0 6
East Side	2	2	0	0	0 4
Elmhurst	1	2	0	0	0 3
Elmwood	2	2	0	0	0 4
Federal Hill	3	4	0	0	1 8
Fox Point	0	5	0	0	0 5
Lower East Side	0	5	0	0	0 5
Manton	1	2	0	0	1 4
Mount Pleasant	1	4	0	0	1 7
North End	1	2	0	1	0 4
Olneyville	4	4	0	1	1 10
Silver Lake	0	1	0	0	1 1
Smith Hill	2	5	0	0	1 8
South Providence	2	6	0	1	1 9
Wanskuck	0	2	0	0	1 3
Washington Park	3	1	0	0	0 4
West End	3	4	0	0	2 9
West Elmwood	1	4	0	0	2 7
Total	31	73	2	3	12 121

*Or without clearly defined tangible or structural cause.

TABLE XI.

FIRST ADMISSIONS TO THE RHODE ISLAND STATE HOSPITAL
FOR MENTAL DISEASES OF PSYCHOTICS FROM PROVIDENCE
BY NEIGHBORHOOD AREAS AND DIAGNOSES, 1938-1948

Disorders Of Psychogenic Origin*						
Dementia Praecox (Schizophrenia)						
Neighborhood Areas	Simple	Hebephrenic	Catatonic	Paranoid	Mixed Total	
Downtown	8	2	3	23	4	40
Camp	3	3	1	6	1	14
East Side	4	3	1	3	0	11
Elmhurst	2	1	4	4	0	11
Elmwood	1	3	6	14	1	25
Federal Hill	11	6	5	8	2	32
Fox Point	7	2	2	3	0	14
Lower East Side	2	1	0	6	2	11
Manton	1	1	2	3	0	7
Mount Pleasant	5	4	5	9	1	24
North End	5	1	3	5	2	16
Olneyville	3	2	2	6	1	14
Silver Lake	3	1	1	3	0	8
Smith Hill	5	5	4	15	1	30
South Providence	8	1	10	12	5	36
Wanskuck	3	3	1	9	1	17
Washington Park	5	1	5	8	0	19
West End	8	2	6	13	6	35
West Elmwood	12	2	6	11	0	31
Total	96	44	67	161	27	395
*Or without clearly defined tangible or structural cause.						

*Or without clearly defined tangible or structural cause.

TABLE XII.

FIRST ADMISSIONS TO THE RHODE ISLAND STATE HOSPITAL
OF MENTAL DISEASES OF PSYCHOTICS FROM PROVIDENCE
BY NEIGHBORHOOD AREAS AND DIAGNOSES, 1938-1948

Neighborhood Areas	Disorders Of Psychogenic Origin*			
	Paranoia	Paranoid States	With Mental Deficiency	With Psychopathic Personality
Downtown	0	6	1	4
Camp	0	2	0	0
East Side	0	1	0	0
Elmhurst	0	1	2	0
Elmwood	1	4	0	0
Federal Hill	1	2	3	0
Fox Point	0	4	3	0
Lower East Side	0	2	0	0
Manton	0	0	0	0
Mount Pleasant	0	2	4	1
North End	0	0	1	0
Olneyville	0	2	3	1
Silver Lake	0	2	3	0
Smith Hill	0	3	1	0
South Providence	1	2	4	7
Wanskuck	0	0	2	2
Washington Park	0	2	1	0
West End	0	1	1	0
West Elmwood	0	5	1	0
Total	3	41	30	15

*Or without clearly defined tangible or structural cause.

2.1%. Psychoses with mental deficiency offered 30 cases, 1.6% of the whole while psychoses with psychopathic personality presented 15 or less than 1%.

While these figures offer ready reference to the rates of psychoses for the City of Providence, it must be emphasized that the neighborhood areas are not comparable in the form presented in Tables III. - XII. This is due to the fact that the various areas are of diverse populations numerically. To account for this, each neighborhood area was given a conversion factor to place them all on the common level of 100,000 population. Psychoses were then figured on this ratio and reduced to an annual rate per 100,000 population for each of the neighborhood areas. In this way the sections of the city were placed on a numerically equal status and could be compared for rates of psychoses.

Figure X., (page 78) illustrates rates of psychoses by census tracts in Providence per 100,000. This indicates the closeness in the rates of those tracts that were combined to form the neighborhood areas and the futility and uselessness of working with 49 separate divisions. Many of these smaller tracts offer too few cases of psychoses to be treated with any degree of reliability. It is presented here only for those who would like a slightly finer splitting of the city than neighborhood areas afford and to demonstrate the method used in assigning psychotic

2.1%. Psychoses with mental deficiency offered 30 cases.
 1.8% of the whole while psychoses with psychopathic per-
 sonality presented 13 or less than 1%.

While these figures offer ready reference to the rates
 of psychoses for the City of Providence, it must be empha-
 sized that the neighborhood areas are not comparable in the
 form presented in Tables III. - XII. This is due to the
 fact that the various areas are of diverse populations
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 figured on this ratio and reduced to an annual rate per
 100,000 population for each of the neighborhood areas. In
 this way the sections of the city were placed on a numer-
 ically equal status and could be compared for rates of
 psychoses.

Figure K., (page 78) illustrates rates of psychoses
 by census tracts in Providence per 100,000. This indicates
 the closeness in the rates of those tracts that were com-
 bined to form the neighborhood areas and the fertility and
 wastefulness of working with 49 separate divisions. Many
 of these smaller tracts offer too few cases of psychoses
 to be treated with any degree of reliability. It is pre-
 sented here only for those who would like a slightly finer
 splitting of the city than neighborhood areas afford and
 to demonstrate the method used in assigning psychotic

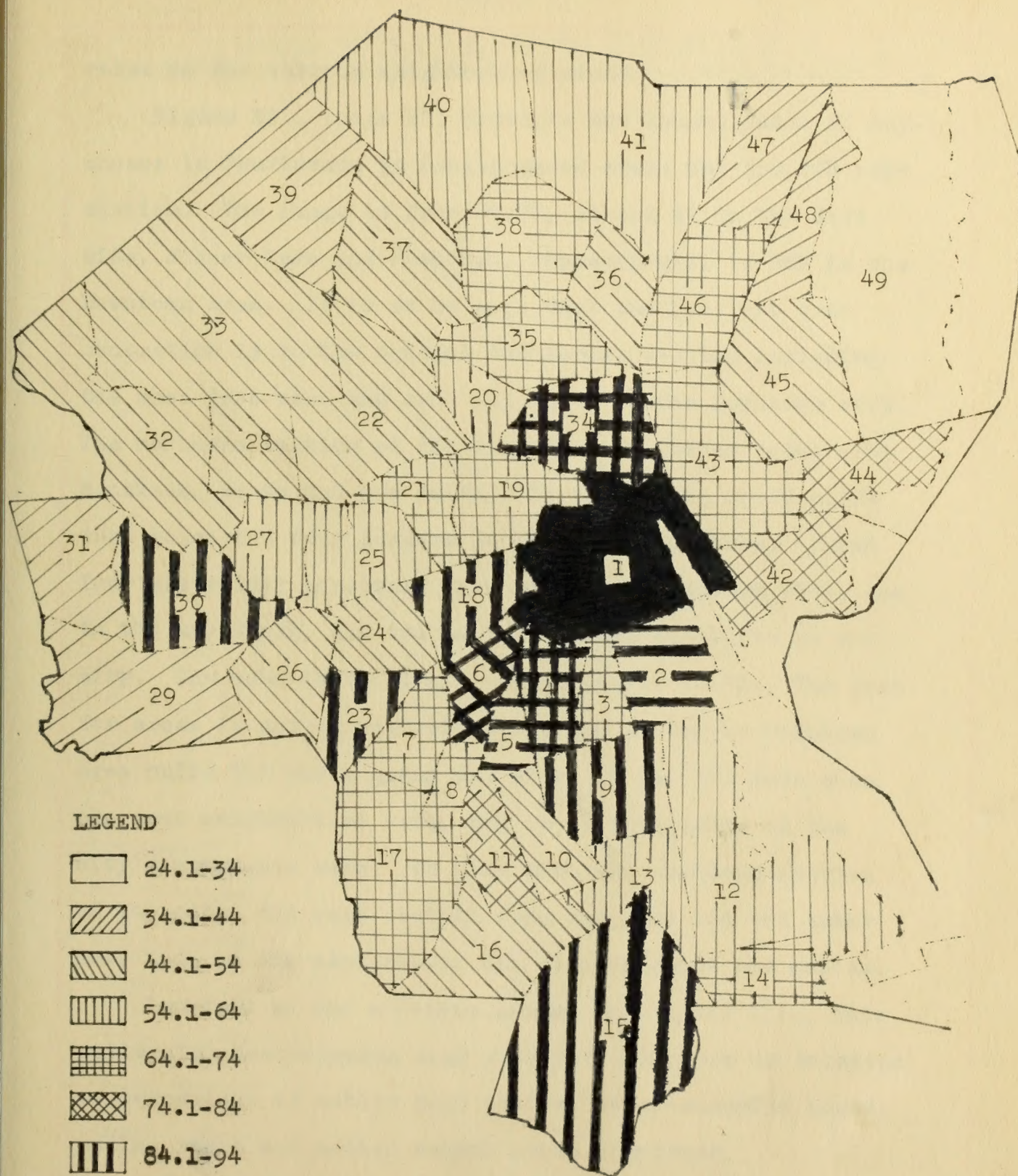
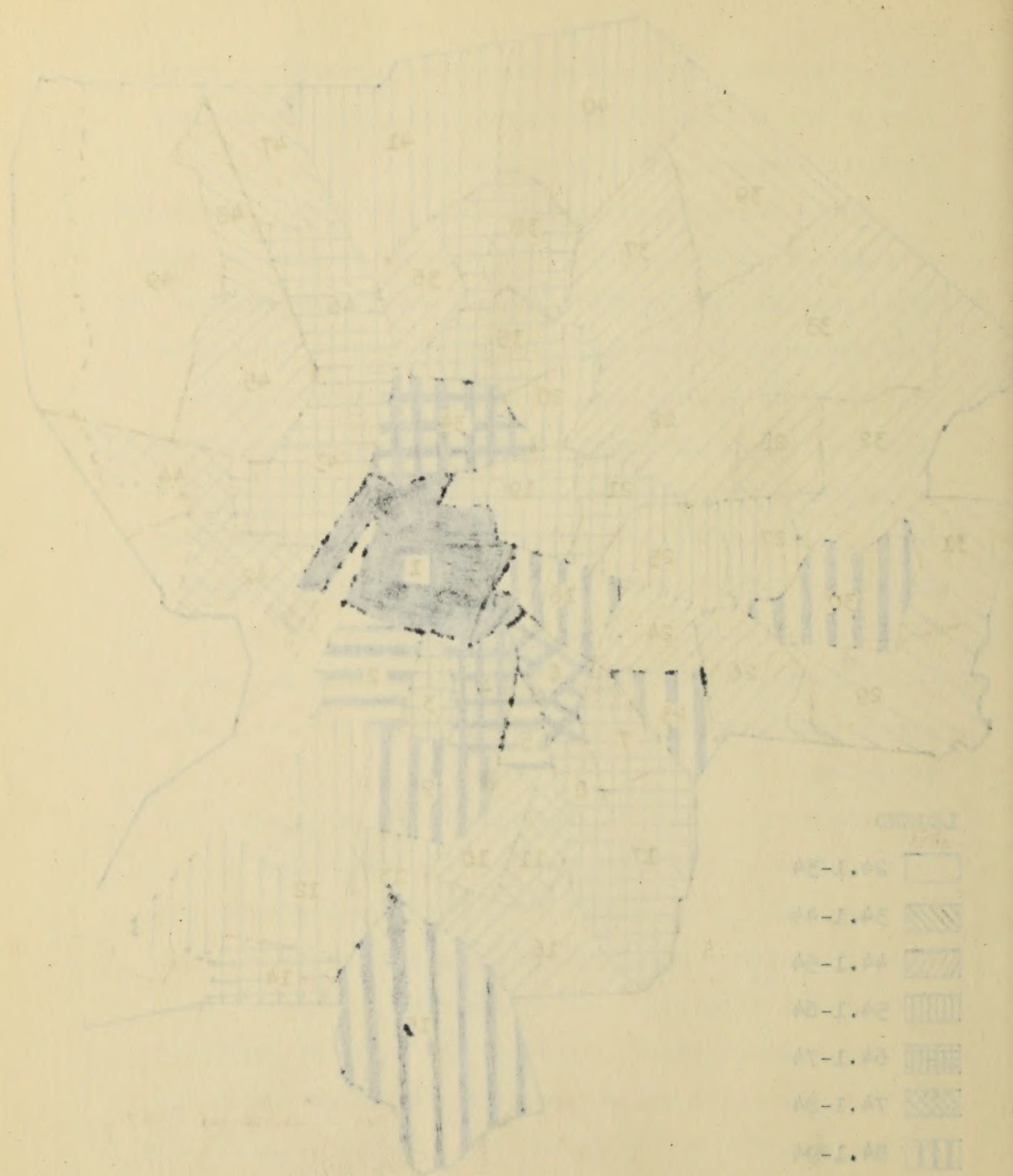


FIGURE X..

FIRST ADMISSIONS OF PSYCHOTICS
BY CENSUS TRACTS PER 100,000



LEGEND	
45-1.45	[Cross-hatch pattern]
44-1.44	[Diagonal lines (top-left to bottom-right)]
43-1.43	[Diagonal lines (bottom-left to top-right)]
42-1.42	[Horizontal lines]
41-1.41	[Vertical lines]
40-1.40	[Diagonal lines (top-left to bottom-right)]
39-1.39	[Diagonal lines (bottom-left to top-right)]
38-1.38	[Horizontal lines]
37-1.37	[Vertical lines]
36-1.36	[Diagonal lines (top-left to bottom-right)]
35-1.35	[Diagonal lines (bottom-left to top-right)]
34-1.34	[Horizontal lines]
33-1.33	[Vertical lines]
32-1.32	[Diagonal lines (top-left to bottom-right)]
31-1.31	[Diagonal lines (bottom-left to top-right)]
30-1.30	[Horizontal lines]
29-1.29	[Vertical lines]
28-1.28	[Diagonal lines (top-left to bottom-right)]
27-1.27	[Diagonal lines (bottom-left to top-right)]
26-1.26	[Horizontal lines]
25-1.25	[Vertical lines]
24-1.24	[Diagonal lines (top-left to bottom-right)]
23-1.23	[Diagonal lines (bottom-left to top-right)]
22-1.22	[Horizontal lines]
21-1.21	[Vertical lines]
20-1.20	[Diagonal lines (top-left to bottom-right)]
19-1.19	[Diagonal lines (bottom-left to top-right)]
18-1.18	[Horizontal lines]
17-1.17	[Vertical lines]
16-1.16	[Diagonal lines (top-left to bottom-right)]
15-1.15	[Diagonal lines (bottom-left to top-right)]
14-1.14	[Horizontal lines]
13-1.13	[Vertical lines]
12-1.12	[Diagonal lines (top-left to bottom-right)]
11-1.11	[Diagonal lines (bottom-left to top-right)]
10-1.10	[Horizontal lines]
9-1.09	[Vertical lines]
8-1.08	[Diagonal lines (top-left to bottom-right)]
7-1.07	[Diagonal lines (bottom-left to top-right)]
6-1.06	[Horizontal lines]
5-1.05	[Vertical lines]
4-1.04	[Diagonal lines (top-left to bottom-right)]
3-1.03	[Diagonal lines (bottom-left to top-right)]
2-1.02	[Horizontal lines]
1-1.01	[Vertical lines]

UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF PLANT INDUSTRY
WASHINGTON, D. C.

rates to the various neighborhood areas.

Figure XI., (page 80) presents the annual rates of psychoses in Providence by neighborhood areas per 100,000 population. The range is from 39.75, 41 and 42 in the East Side, Silver Lake and Elmhurst, respectively, to 259 in the Downtown Area. It is to be seen that the heaviest concentration is in the central industrial section including the area just west and east and south of the Downtown area. The northern section of the city has the lowest rates with Wanskuck, North End and Smith Hill all in the 50-62 class just below the four leaders in the 37 to 49 class. These four are widely scattered with one on the eastern side, one in the northwest, and two on the western outskirts of the city. The mean is 74.61 and the median is 65.33. The mean for areas is not an accurate criterion since the Downtown area pulls the whole group up, since it has 161 more than the next neighborhood area, but it is indicative of the city's psychotic rate. We find that the southern section of the city, the west central area and Camp and the Lower East Side on the east sector all cluster about the median.

Compared to the criteria set up in Chapter III., this patterning demonstrates some remarkable aspects in relation to percentage of native born whites, owner-occupied homes, median rents and median school years completed.

Comparing nativity with psychotic rates in neighborhood areas there is a correlation of $.27 \pm .15$. This correl-

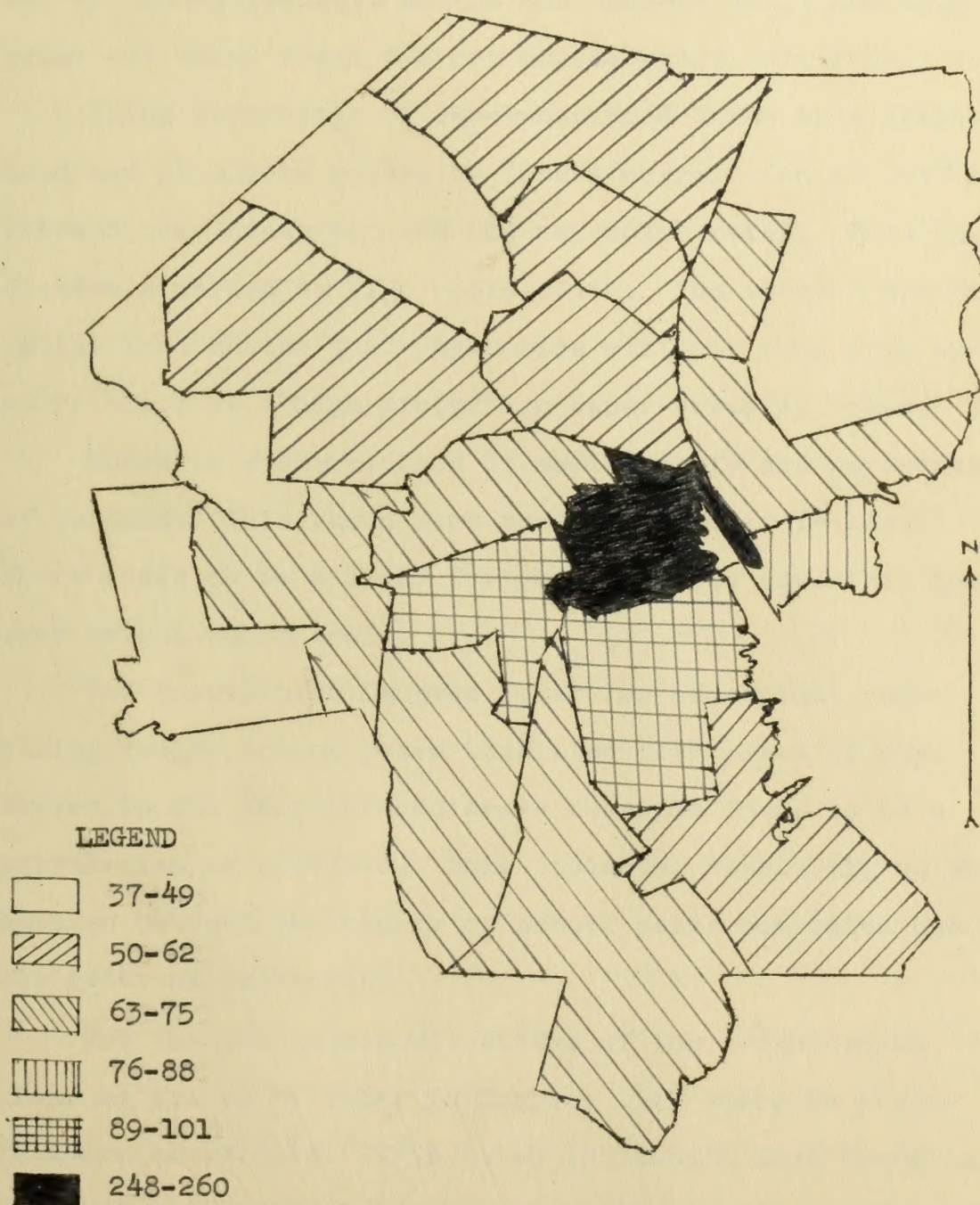
rates to the various neighborhood areas.

Figure XI., (page 80) presents the annual rates of psychosis in Providence by neighborhood areas per 100,000 population. The range is from 38.75, 41 and 42 in the East Side, Silver Lake and Elmwood, respectively, to 229 in the Downtown Area. It is to be seen that the heaviest concentration is in the central industrial section including the area just west and east and south of the Downtown area. The northern section of the city has the lowest rates with Wanskuck, North End and South Hill all in the 50-60 class just below the four leaders in the 25 to 44 class. These four are widely scattered with one on the eastern side, one in the northwest, and two on the western outskirts of the city. The mean is 74.61 and the median is 65.33. The mean for areas is not an accurate criterion since the Downtown area pulls the whole group up, since it has 181 more than the next neighborhood area, but it is indicative of the city's psychotic rate. We find that the southern section of the city, the west central area and Camp and the Lower East Side on the east section all cluster about the median. Compared to the criteria set up in Chapter III., this patterning demonstrates some remarkable aspects in relation to percentage of native born whites, owner-occupied homes, median rents and median school years completed.

Comparing nativity with psychotic rates in neighborhood areas there is a correlation of .271.16. This correl-

FIGURE XI..

ANNUAL RATES OF PSYCHOSES IN PROVIDENCE
BY NEIGHBORHOOD AREAS PER 100,000 POPULATION, 1938-1948



RECEIVED BY THE DIRECTOR OF THE BUREAU OF LAND MANAGEMENT
 U.S. DEPARTMENT OF THE INTERIOR
 WASHINGTON, D.C. 20250



LEGEND

37-43	[Solid Light Blue Box]
50-55	[Diagonal Line Box]
63-75	[Cross-hatch Box]
76-88	[Diagonal Line Box]
89-101	[Diagonal Line Box]
102-200	[Cross-hatch Box]

ation is so low as to be negligible. It promises little in predictive value. Knowing which areas have a high number of non-native born whites and Negroes would not help point out which areas the psychotics would come from.

Using percentage of owner-occupied homes in a neighborhood and psychotic rates, we find a correlation of $.74 \pm .13$ between home ownership and low psychotic rates. This indicates a marked to high correlation. The chances are 30% better than chance that psychotics will not come from areas where there is a high proportion owner-occupied homes.

There is a correlation of median rents and psychoses of $.35 \pm .13$. This shows some tendency, but it is low. There seems to be a trend for psychotics to come from low rent neighborhood areas.

The correlation is even lower for education. Comparing median school years completed with rates of psychoses in the neighborhood areas there is found to be a correlation of $.025 \pm .16$. This indicates absolutely no connection between the number of school years completed and the rates of psychoses.

For the socio-economic status of the neighborhood areas as set up by index in Chapter III. there is a correlation of $.37 \pm .13$. This is an indication that there is a slight connection between socio-economic areas, as measured by the total socio-economic index, and psychotic rates.

action is so low as to be negligible. It promises little in predictive value. Knowing which areas have a high number of non-native born whites and Negroes would not help point out which areas the psychotics would come from.

Using percentage of owner-occupied homes in a neighborhood and psychotic rates, we find a correlation of .74±.13 between home ownership and low psychotic rates. This indicates a marked to high correlation. The chances are 30% better than chance that psychotics will not come from areas where there is a high proportion owner-occupied homes.

There is a correlation of median rents and psychoses of .53±.13. This shows some tendency, but it is low. There seems to be a trend for psychotics to come from low rent neighborhood areas.

The correlation is even lower for education. Comparing median school years completed with rates of psychoses in the neighborhood areas there is found to be a correlation of .08±.18. This indicates absolutely no connection between the number of school years completed and the rates of psychoses.

For the socio-economic status of the neighborhood areas as set up by index in Chapter III, there is a correlation of .57±.15. This is an indication that there is a slight connection between socio-economic areas, as measured by the total socio-economic index, and psychotic rates.

Inspections of Figures IV., V., VI., VII. and comparison with Figure XI. indicates these results almost by observation.

When Figure IX., the index of socio-economic status, is contrasted with Figure XI., annual rates of psychoses, it can be seen that the northern section of the city which has some of the worst socio-economic conditions has some of the lowest psychotic rates. Only in the Downtown area is there a real consistency.

This study next separates the organic from the functional psychoses to observe whether these psychoses are from the same neighborhood areas. It is to be expected that if the contention is true that socio-economic areas of a low level produce psychoses, this will be reflected in the functional psychoses, and that the organic diseases will show little if any relationship to the economic pattern of the city.¹

Figure XII., (page 83) shows the distribution of organic psychoses by neighborhood areas. The pattern is generally the same as that for all psychoses. The center of the city still shows the densest concentration with the worst areas just to the south, while the northern areas reflect a lower rate. The median neighborhood area for the city is Wanskuck with an annual rate of 42.64 and

1. Ibid., p. 53.

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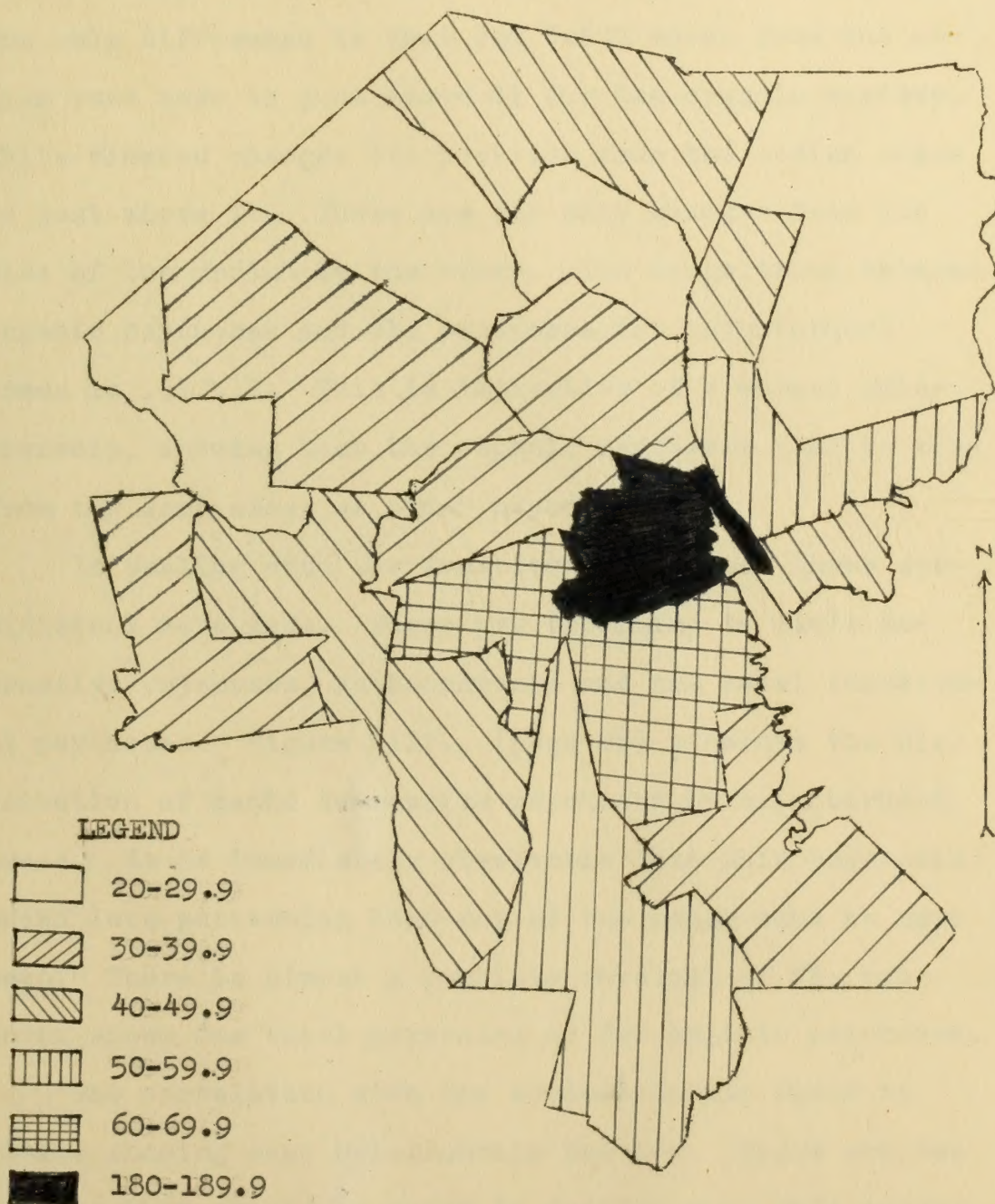
This study next separates the organic from the functional psychoses to observe whether these psychoses are from the same neighborhood areas. It is to be expected that if the contention is true that socio-economic areas of a low level produce psychoses, this will be reflected in the functional psychoses, and that the organic diseases will show little if any relationship to the economic pattern of the city.¹

Figure XII., (page 83) shows the distribution of organic psychoses by neighborhood areas. The pattern is generally the same as that for all psychoses. The center of the city still shows the densest concentration with the worst areas just to the south, while the northern areas reflect a lower rate. The median neighborhood area for the city is Wanskuck with an annual rate of 42.64 and

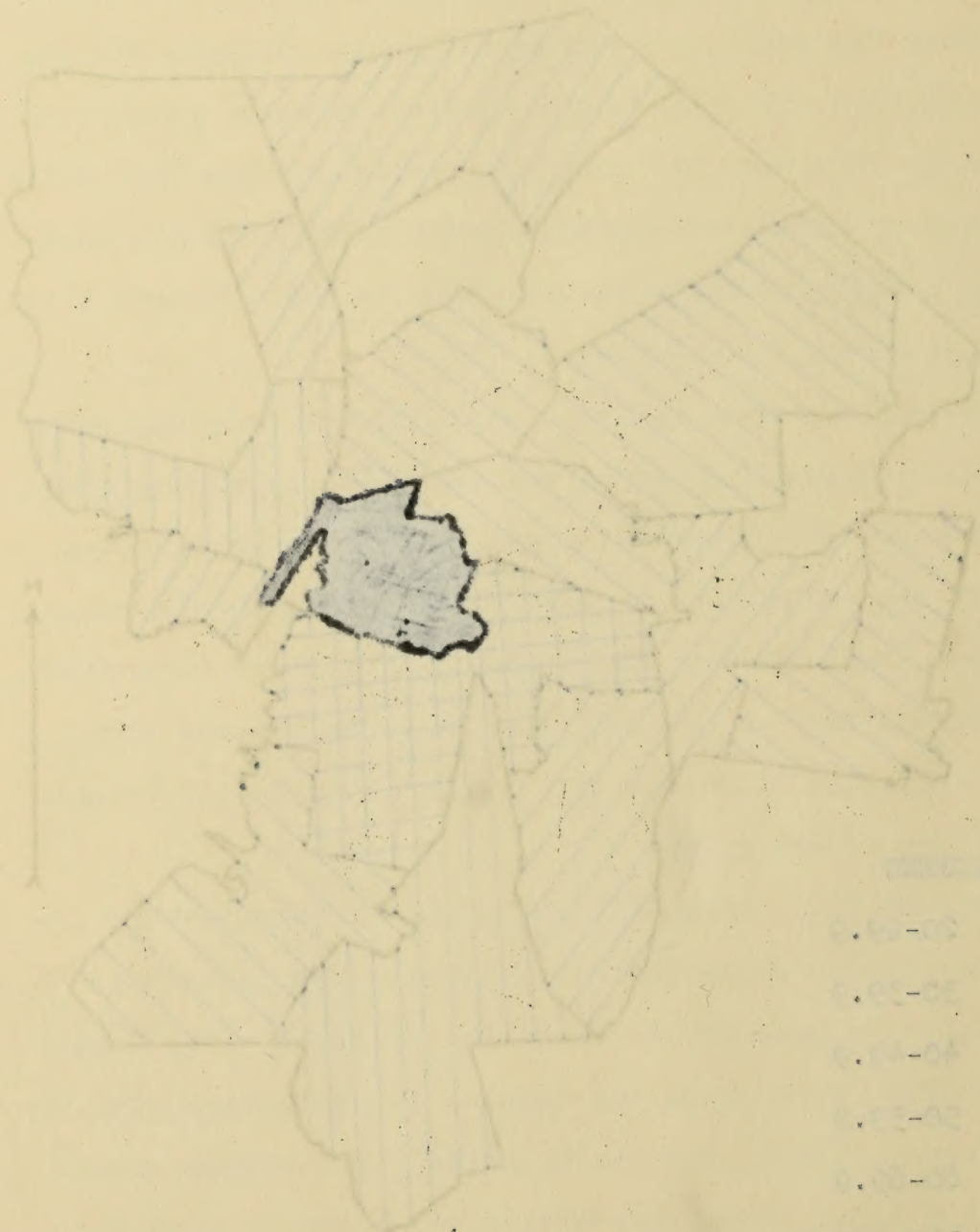
1. Ibid., p. 83.

FIGURE XII.

ANNUAL RATES OF ORGANIC PSYCHOSES IN PROVIDENCE
BY NEIGHBORHOOD AREAS PER 100,000 POPULATION, 1938-1948



ANNUAL RAINFALL OF 1950-1951 IN THE
BY WASHINGTON AREA 100,000 100,000 100,000



LEGEND

100-150.0	[Solid dark pattern]
80-100.0	[Diagonal lines, top-left to bottom-right]
60-80.0	[Diagonal lines, bottom-left to top-right]
40-60.0	[Cross-hatch pattern]
20-40.0	[Horizontal lines]
0-20.0	[Vertical lines]

Elmwood, West Side, Lower East Side, South Providence together with Downtown are above the median in psychotic rates. Figure XI. reveals that in all psychotic rates the only difference is that Fox Point moves from the median rate here to just above it for the organic variety, while Elmwood changes its position from the median class to just above it. These are the only changes from one side of the median to the other. The correlation between organic psychoses and all psychoses for neighborhood areas is $.59 \pm .10$. This is indicative of a marked relationship, showing that the organic psychoses tend to come from the same areas as other psychoses.

In dealing with the functional psychoses three subdivisions were made. These are according to manic depressive psychoses, schizophrenia and the total functional psychoses. Figure XIII., (page 85) presents the distribution of manic depressive psychoses by neighborhood areas. It is immediately observable that this psychosis shows less patterning than any of the other maps we have seen. There is almost a complete reversal of the patterns shown for total psychoses or for organic psychoses.

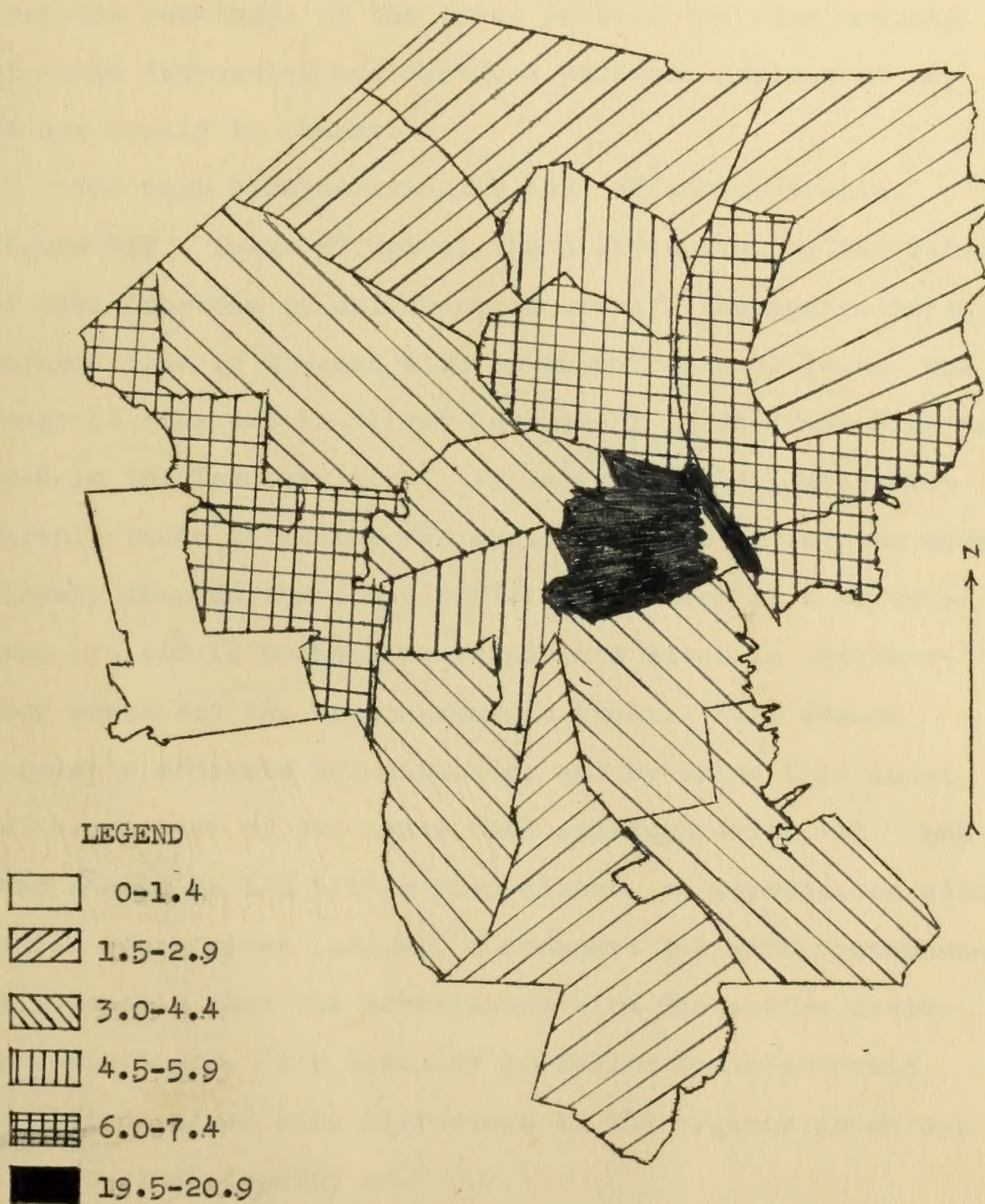
The correlation with the socio-economic index is $.43 \pm .13$, showing some relationship but low. There are two dangers that should be noted in dealing with this group: (1) the number of cases was only 121 for the ten year period, perhaps too few to be reliable, and (2) testing

Elmwood, West Side, Lower East Side, South Providence together with Downtown are above the median in psychotic rates. Figure XI. reveals that in all psychotic rates the only difference is that Fox Point moves from the median rate here to just above it for the organic variety, while Elmwood changes its position from the median class to just above it. These are the only changes from one side of the median to the other. The correlation between organic psychoses and all psychoses for neighborhood areas is .597.10. This is indicative of a marked relationship, showing that the organic psychoses tend to come from the same areas as other psychoses.

In dealing with the functional psychoses three subdivisions were made. These are according to manic depressive psychoses, schizophrenia and the total functional psychoses. Figure XIII. (page 85) presents the distribution of manic depressive psychoses by neighborhood areas. It is immediately observable that this psychosis shows less patterning than any of the other maps we have seen. There is almost a complete reversal of the pattern shown for total psychoses or for organic psychoses. The correlation with the socio-economic index is .43.13, showing some relationship but low. There are two dangers that should be noted in dealing with this group: (1) the number of cases was only 121 for the ten year period, perhaps too few to be reliable, and (2) testing

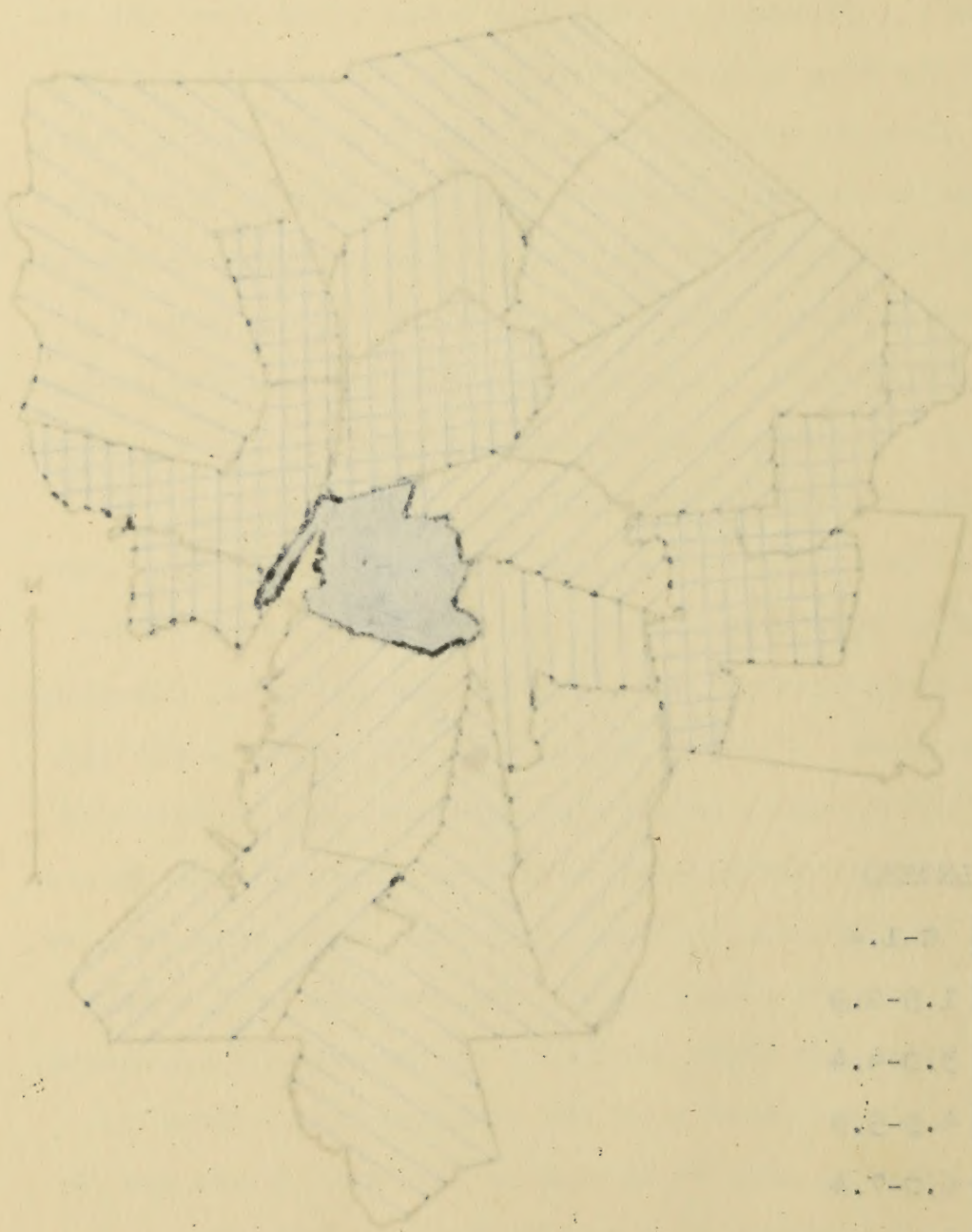
FIGURE XIII.

ANNUAL MANIC DEPRESSIVE RATES IN PROVIDENCE
BY NEIGHBORHOOD AREAS PER 100,000 POPULATION, 1938-1948



PLANT COMMUNITY

ANALYSIS OF PLANT COMMUNITY DATA IN MONTANA
BY J. H. HARRIS AND J. H. HARRIS, JR. 1968



- 0-1.0
- 1.0-2.0
- 2.0-3.0
- 3.0-4.0
- 4.0-5.0
- 5.0-6.0
- 6.0-7.0

for a statistically significant difference this could be found only for the extremes - Downtown with the rest of the areas. We are thus forced to accept the hypothesis that the remainder of the areas produce the same amounts of manic depression and that the patterns arrived at may be due merely to chance.

The next consideration is that of schizophrenia. Figure XIV., (page 87) gives the distribution of the rates of schizophrenia by neighborhood areas. The median neighborhood area is Elmwood with an annual rate of 15.2. The range is from 4.5 in Silver Lake and 7 in the East Side to 40.9 in the Downtown area. It is observable that schizophrenia tends to follow the socio-economic patterning more closely than do the other divisions. There is a correlation of $.51 \pm .11$ between schizophrenia rates in neighborhood areas and the socio-economic index. This demonstrates a moderate relationship, and by using this index our prediction of the areas that schizophrenics will come from should be 13% better than chance. A correlation with median rents gives $.55 \pm .11$, a moderate but more pronounced relationship than the correlation with the entire socio-economic index. The tendency to follow socio-economic conditions gives some difference to the organic psychoses but not significantly so.¹

1. As seen by the test of statistical significance on page 92.

for a statistically significant difference this could be found only for the extremes - Downtown with the rest of the areas. We are thus forced to accept the hypothesis that the remainder of the areas produce the same amount of manic depression and that the pattern arrived at may be due merely to chance.

The next consideration is that of schizophrenia. Figure XIV, (page 87) gives the distribution of the rates of schizophrenia by neighborhood areas. The median neighborhood area is Kimwood with an annual rate of 13.2. The range is from 4.8 in Silver Lake and 7 in the East Side to 40.9 in the Downtown area. It is observable that schizophrenia tends to follow the socio-economic pattern more closely than do the other divisions. There is a correlation of .8111 between schizophrenia rates in neighborhood areas and the socio-economic index. This demonstrates a moderate relationship, and by using this index our prediction of the areas that schizophrenics will come from should be 13% better than chance. A correlation with median rates gives .5511, a moderate but more pronounced relationship than the correlation with the entire socio-economic index. The tendency to follow socio-economic conditions gives some difference to the organic psychoses but not significantly so.¹

1. As seen by the test of statistical significance on page 82.

FIGURE XIV.

ANNUAL SCHIZOPHRENIA RATES IN PROVIDENCE
BY NEIGHBORHOOD AREAS PER 100,000 POPULATION, 1938-1948

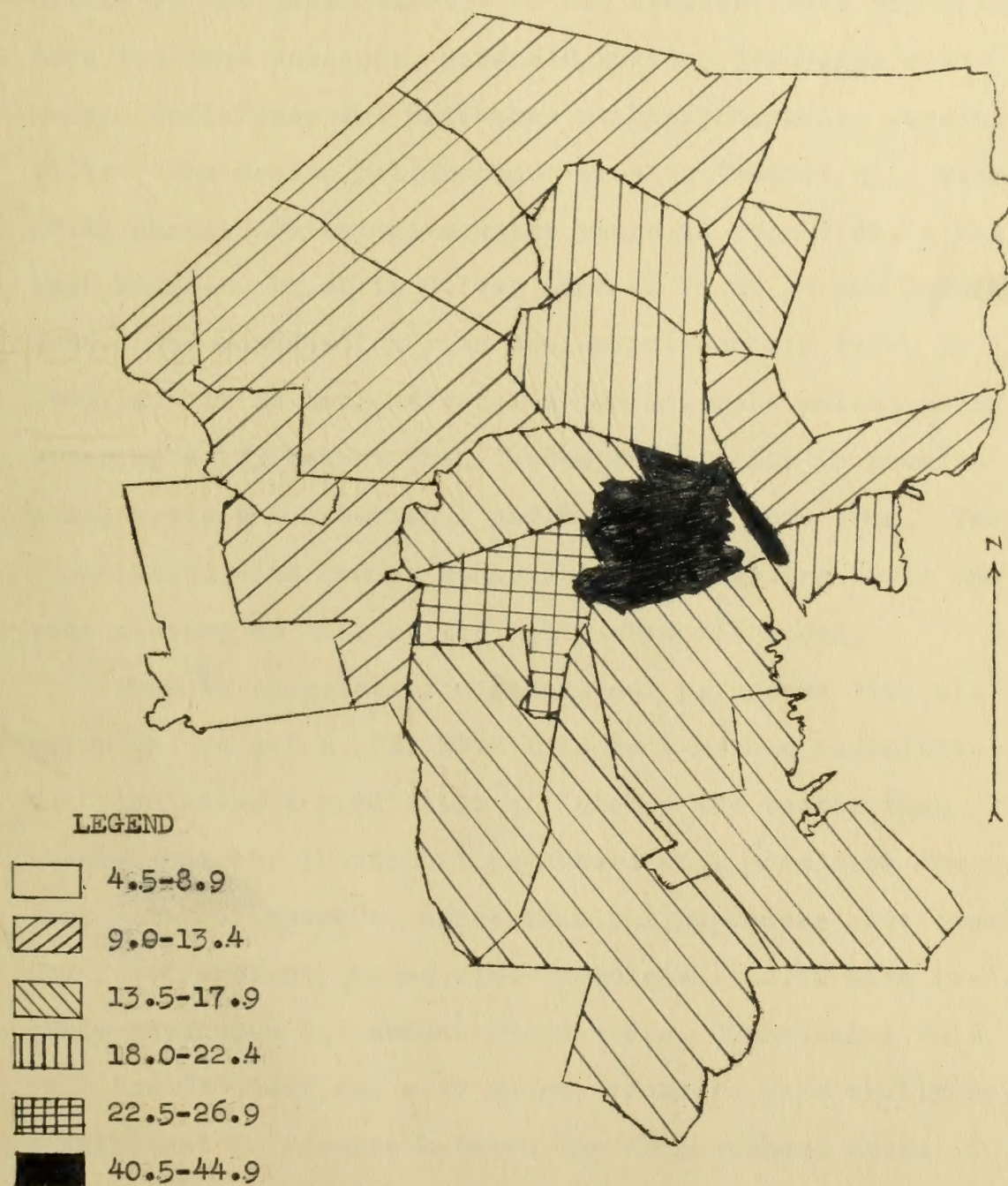
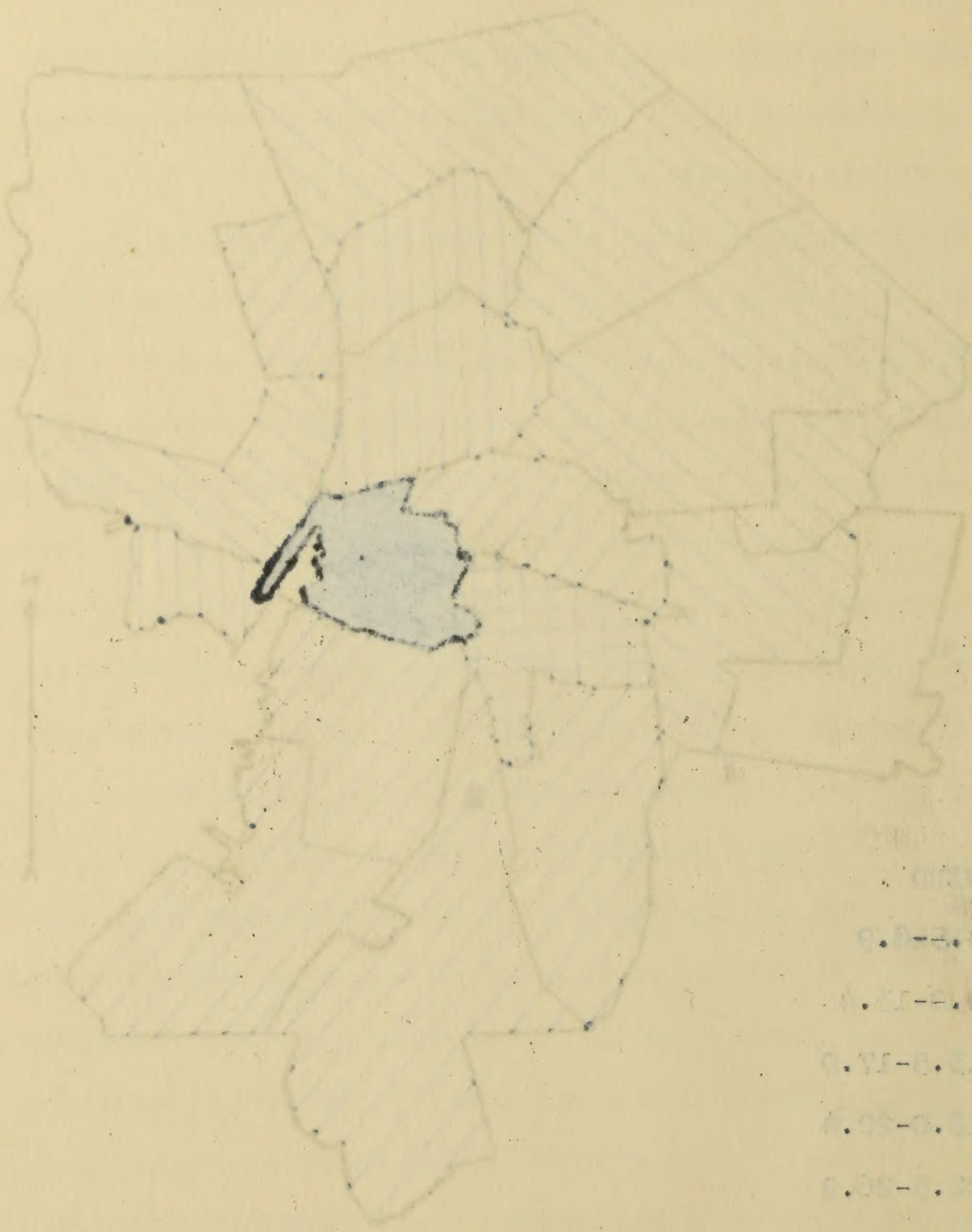


PLATE IV

ANNUAL BUDGETARY DATA IN FIVE-YEAR PERIODS
1901-1905, 1906-1910, 1911-1915, 1916-1920, 1921-1925



Legend

1901-1905	[White box]
1906-1910	[Diagonal lines]
1911-1915	[Cross-hatch]
1916-1920	[Vertical lines]
1921-1925	[Horizontal lines]

Figure XV., (page 89) presents the distribution of total functional psychoses by neighborhood areas. In addition to the manic depressive and schizophrenic psychoses, this includes paranoia, paranoid states, psychoses with mental deficiency and psychoses with psychopathic personality. The median neighborhood area is Federal Hill with 23.43 annual admissions and the range is from 9.96 in the East Side and 10.35 in Silver Lake to 72.54 in the Downtown area. The correlation with the socio-economic index is $.50 \pm .12$. It is indicative of a low moderate relationship offering a 13% better than chance opportunity to predict which areas the functional psychoses will come from. The correlation with median rents is $.48 \pm .11$ giving about the same picture as that of the socio-economic index.

When we correlate the functional psychoses with all psychoses we get a $.73 \pm .07$. This is a marked correlation that indicates a prediction efficiency 43% better than chance that the functional psychoses will come from the very same neighborhood areas that all psychoses come from. The functional psychoses also correlate $.47 \pm .12$ with organic psychoses for neighborhood areas. Continuing this path the "t" test was made to see if there were really any significant difference between the neighborhood areas of the organic and functional psychoses. The critical ratio found was 1.12; while using 36 degrees of freedom it was necessary to have minimums of 1.306 at a 20% level of

Figure XV. (page 89) presents the distribution of total functional psychoses by neighborhood areas. In addition to the manic depressive and schizophrenic psychoses, this includes paranoia, paranoid states, psychoses with mental delinquency and psychoses with psychopathic personality. The median neighborhood area is Federal Hill with 23.43 annual admissions and the range is from 9.98 in the East Side and 10.55 in Silver Lake to 72.34 in the Downtown area. The correlation with the socio-economic index is .50112. It is indicative of a low moderate relationship offering a 13% better than chance opportunity to predict which areas the functional psychoses will come from. The correlation with median rents is .48111 giving about the same picture as that of the socio-economic index.

When we correlate the functional psychoses with all psychoses we get a .73107. This is a marked correlation that indicates a prediction efficiency 43% better than chance that the functional psychoses will come from the very same neighborhood areas that all psychoses come from. The functional psychoses also correlate .47112 with organic psychoses for neighborhood areas. Continuing this path the "t" test was made to see if there were really any significant difference between the neighborhood areas of the organic and functional psychoses. The critical ratio found was 1.12; while using 36 degrees of freedom it was necessary to have minimum of 1.308 at a 20% level of

FIGURE XV..

ANNUAL RATES OF FUNCTIONAL PSYCHOSES IN PROVIDENCE
BY NEIGHBORHOOD AREAS PER 100,000 POPULATION, 1938-1948

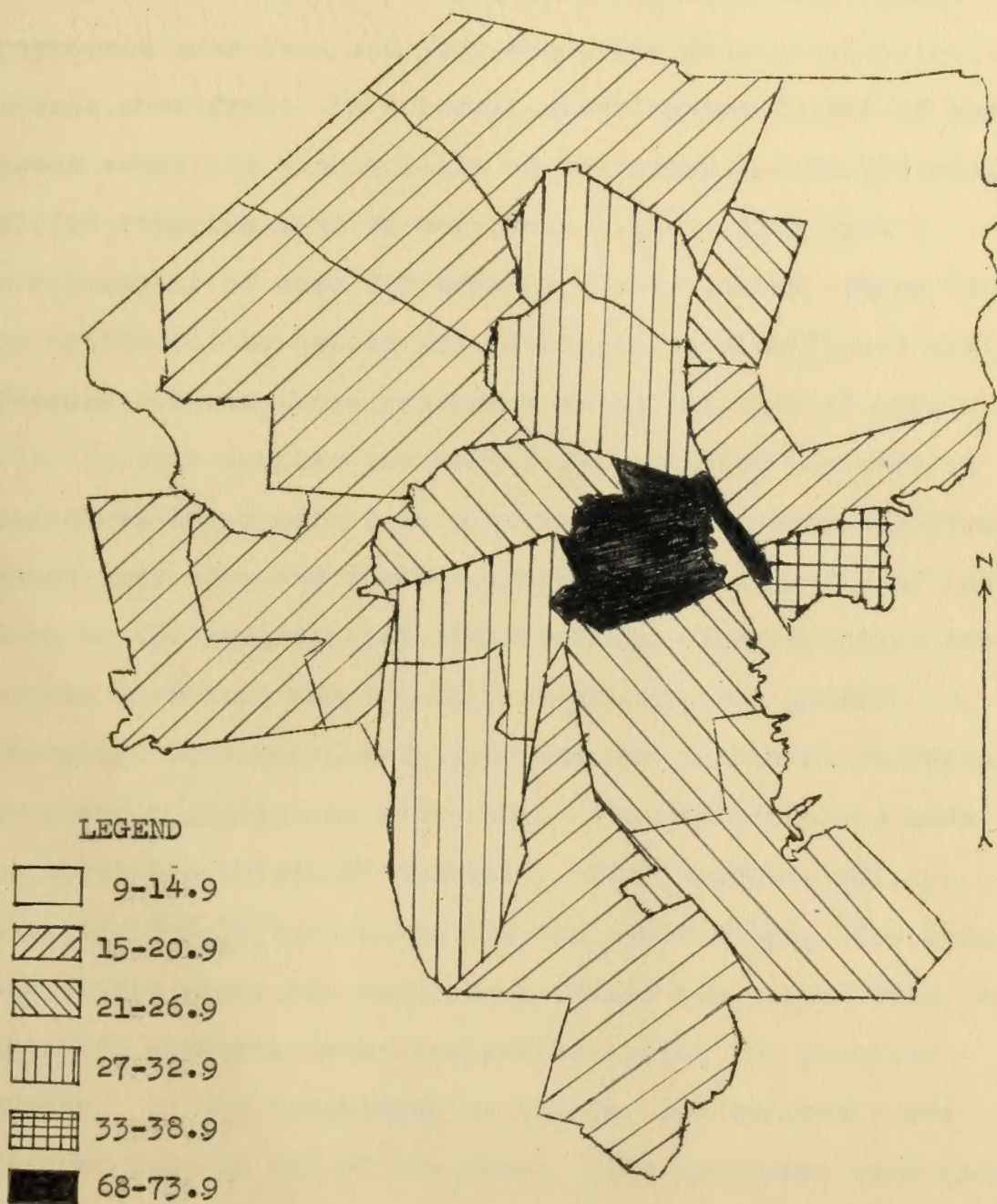
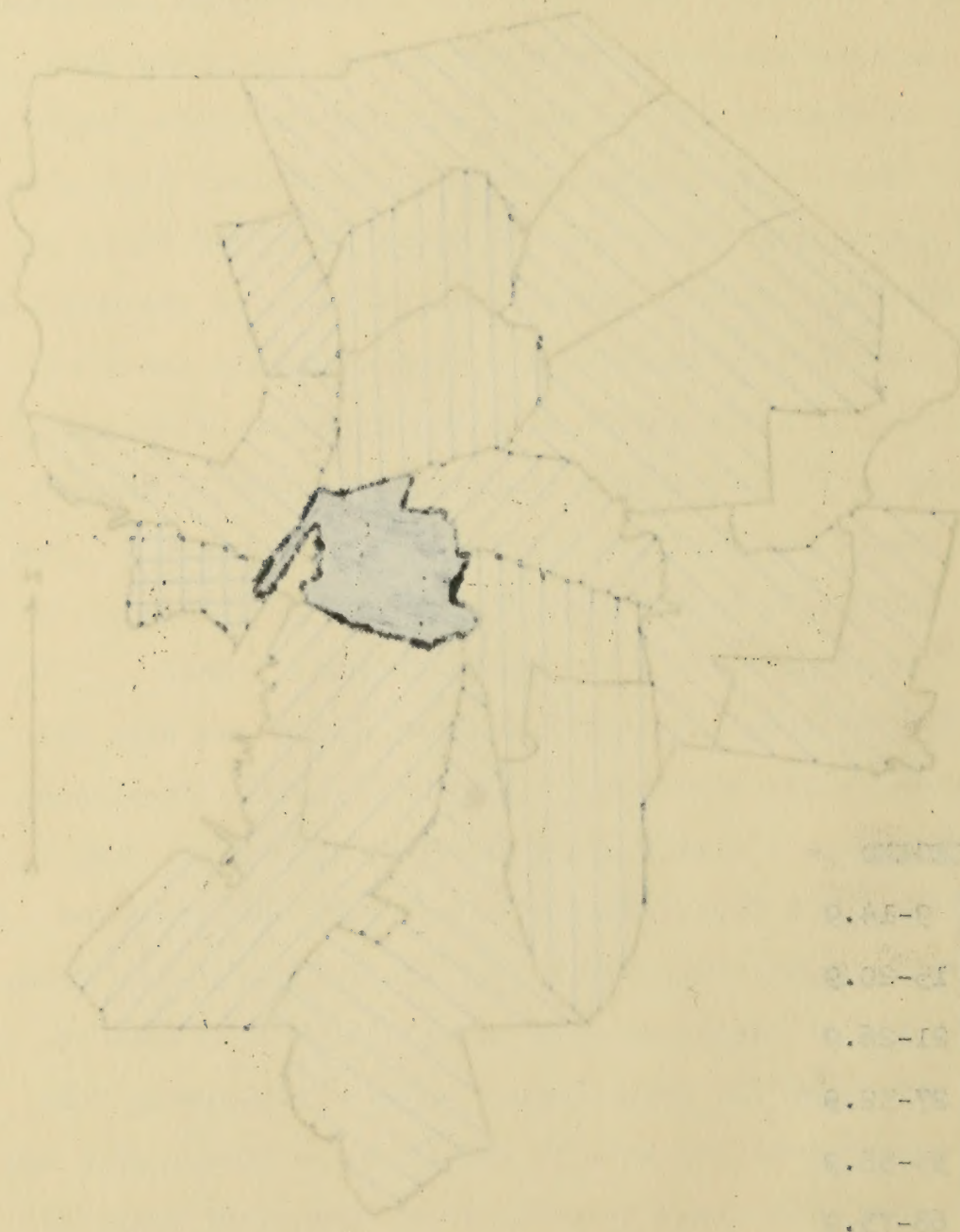


FIGURE XV.

ANNUAL RATES OF FUNCTIONAL PSYCHOSES IN INDIANAPOLIS
BY NEIGHBORHOOD AREA PER 100,000 POPULATION, 1912-1942



confidence, 2.029 at 5%, 2.438 at 2%, 2.722 at 1% and 2.601 at .1%. This indicates that there is no significant difference between which neighborhood areas the organic psychoses come from and from where the functional psychoses come from. In a normal distribution 73.30% of the cases would lie within 1.12σ of the mean, and 26.70% would differ from the mean by more than 1.12σ . With such a great amount of case differences due to chance, there is no option but to assume that there is no significant difference between these psychoses as to the area of origin.

In this chapter the writer has analyzed the various psychoses in an effort to discover the neighborhoods from which they came and whether there was any significant pattern to the geographical distribution. The psychoses were broken down into the specific diagnoses, the general groupings into which they fell and the neighborhood areas from which admissions were made. Organic psychoses made up about two-thirds of the total with psychoses of psychogenic origin accounting for the other third. The largest single group was that of psychoses associated with old age, with cerebral arteriosclerosis having the greatest number. In the functional psychoses, schizophrenia was seen to make up 65% of the group. The psychoses were then plotted on maps to make possible a comparison of the geographic patterns. Correlations arrived at exhibited a range of no comparison when psychoses were placed opposite

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education to a marked relationship with the amount of owner-occupied homes. It was also seen that the functional psychoses correlate in a marked manner with all psychoses and moderately with organic psychoses on the basis of neighborhood areas of origin. While the degree of correlation was only moderate with the organic psychoses, the functional psychoses showed no statistically significant difference with the former in neighborhoods of concentration. The probable reason for the difference is that the correlation was done by the corrected (Pearson) rank order method. This order persisted even though the actual difference between the neighborhoods might have no significance and be merely due to chance. This was detected when a test for significance was used. This left us with the conclusion that there is no difference between the neighborhood areas in which the psychotics of organic and functional nature reside. This leaves the writer with the necessity of summing up his conclusions and analyzing the implications for the social worker.

Their higher psychotic rates. The following table shows psychotic rates closely resemble that of the general population.

The first major problem was to find out how many of the following number of persons of an average age of 25 years.

1. Bureau of the Census, United States Department of Commerce, Statistics in Social and Economic Studies.

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CHAPTER VI.

DISCUSSION OF RESULTS

The City of Providence represents 34% of the population of Rhode Island and contributes 33% of the first admissions to the Rhode Island State Hospital of those suffering from one or another of the psychoses. It would appear to this writer that the city is probably representative of the state as a whole, and the types of psychoses that come from this city are indicative of the types from other parts of the state in respective proportions. Providence is also typical of the cities of the United States in the percentage of each type of psychoses admitted to the state hospitals although it is a bit better in its rate of psychosis for the population as a whole.¹ The writer feels that the facts found in this study to be true of Providence are probably applicable to the other cities of the country with allowance made for their higher psychotic rates. The patterning of psychotic rates closely resembles that of Chicago.

The first major problem met in this study is the appalling number of persons of an advanced age who are

1. Bureau of the Census, United States Department of Commerce, Patients in Mental Institutions, 1944.

1. Philadelphia and New York City.

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palling number of persons of an advanced age who are

1. Bureau of the Census, United States Department of Commerce, Patients in Mental Institutions, 1944.

admitted to the state hospital suffering from a mental disease. It suggests that perhaps another solution is necessary to solve the problems of the aged. It is felt that any group that contributes one out of every four admissions to the mental institutions requires special consideration. Some of the other cities have already begun to take special measures to anticipate and meet this situation.¹ It is suggested here that perhaps there is a more efficient, more economical, more humane way to care for the aged than in mental hospitals. It might be conceivable to avoid some of these psychotic breakdowns by providing outlets and contacts for these individuals.

For the social worker it offers a twofold challenge. It would appear that social action of a dynamic nature is called for, and this is a task for the conscientious worker. From a second standpoint, these figures should serve as a guide in dealing with the aged. The type of manipulation that provides funds and allows the old person to live alone in a furnished room without further attention is to be questioned. The need for constant case work and the opportunity for emotional relief for these people may keep them in the community. The problem certainly requires further investigation.

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The next implication from the observation of the

figures is that presented by the psychoses of a psychogenic origin. It is to be remembered that this was compiled on the most conservative basis, including only those diagnoses that are considered unquestionably functional and placing those diagnoses about which there is doubt or controversy under an organic classification. But even on this basis they account for over 31% of the total psychotics. Of these, schizophrenia produces 65.3% and manic depressive psychoses 20%. These are particularly important figures; they speak of something that the social worker can actively work in preventing. Although it has been pointed out that there is only a moderate relationship with socio-economic areas, the fact that there is some relationship should serve as a warning signal when working with persons from the poorer areas. In spite of the lack of any substantial evidence of a real relationship between psychoses and the total number of socio-economic areas, it can be observed that certain areas do provide a disproportionate amount of mentally ill. This is particularly the Downtown section.

Why should this be true? It was shown in Chapter V. that there is no significant difference between the share of organic psychoses and the share of functional psychoses provided by any neighborhood area. This would indicate that the neighborhood area conditions by themselves do not produce psychotic states. We would normally presume that

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if one set of conditions (the organic) are independent of the environment there would be a sharp difference in areas of density with the functional psychoses (were these produced by the environment). But this is not true. We must then conclude that functional psychoses are independent of the adult environment in which they emerge in the same manner that the organic psychoses.

It has been shown, however, that there is a significant difference in the rates from various neighborhood areas. The comparisons with the nativity figures indicate that mental illness does not necessarily concentrate in areas where there is a low number of native whites. When compared with education the figures flatly contradict any contention that psychoses are correlated with education in any way, either positively or negatively.

It is only when work is started with median rents and home ownership that the beginning of a trend is seen. The correlation of $.35 \pm .13$ is low but it indicates that something may be operating to affect the psychotic rates. With functional psychoses alone this figure climbs to $.48 \pm .11$ and when median rents are compared with schizophrenia there is $.55 \pm .11$ correlation. In other words there is a tendency for psychotics to come from low rent areas. This increases as the psychoses used for measurement are limited to those of a functional nature and it becomes even more pronounced when simply enumerating schizophrenics.

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This trend becomes even more accentuated when we use owner-occupied homes as a criterion. For there is a true negative correlation of $-.74 \pm .13$. Here there is a marked indication that psychotics do not come from neighborhood areas where there is a high percentage of owner-occupied homes.

These figures correlating rent and home ownership with areas of psychoses leave the writer with his original hypothesis, that is, that psychotics come from low rent areas, - rooming house areas, and areas particularly susceptible to the transient. This is due to the fact that long before the psychotic has been admitted to the hospital he has stopped operating at his peak efficiency and is sliding down hill economically. It is illustrated in this study by the fact that those psychoses that are insidious or gradual in onset show a greater concentration in the lower rent areas while those that are sudden in onset come from the better neighborhood areas. That explains why the schizophrenic has a higher correlation with low rent areas than the other psychoses. Looking at Table III.¹ it can be seen that this is true even within the family of schizophrenics. Catatonia is low with only 3 cases in the Downtown area. This is the classification that is considered sudden in onset. Schizophrenia, paranoid type, however, which is

1. Page 73.

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notoriously gradual in onset shows 23 cases in the Downtown area, 8 higher than the next nearest neighborhood area. This also explains why there is a contrast between the distribution of schizophrenia and manic depression in the city. The latter is more acute in onset with either a cyclical course in which the individual is soon able to return to normal activity or he is hospitalized.

Faris and Dunham¹ considered this drift hypothesis but rejected it. They compared age variations and admission areas of both paranoids and catatonics. They felt that the older ages of both classes would have more time to drift than the younger admissions. This overlooks the dynamic origins of schizophrenia and seems to imply that the old must necessarily have had their psychotic condition longer than the young group. The assumption ignores the fact that the schizophrenic has a pre-psychotic character that calls for a desire for withdrawal and seclusion. It is natural that he should find the concentration of both old and young paranoids in the rooming house area.²

In dealing with catatonics these authors run into more difficulty. Here they find that the rooming house area has a low rate of younger cases and a high concentration of

1. Robert E. L. Faris and H. Warren Dunham, Mental Disorders in Urban Areas, p. 164.

2. Ibid. 164.

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1. Robert E. L. Paris and H. Warren Dunham, Mental Disorders in Urban Areas, p. 184.

2. Ibid. 184.

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They make no attempt to compare the organic and functional psychoses because of their major assumption that, "A constitutional basis is an essential condition for a 'functional' as well as for an organic mental disorder."² This assumption I submit is unjust and unfounded. This "constitutional" premise lies at the bottom of their entire work.

For the social worker and the social agency the implications are plain. The policy of aiding the client by securing him a room in the rooming house area is open to question. Placing the client at the cheapest means available does not answer the question. In dealing with the neurotic or the schizoid personality, a move of this kind may be fatal to his mental health. Consider the environs and the type of personalities he is to confront in his new home.

Knowing the neighborhood area from which a client comes to the agency is also important. For this is indicative of the type of forces that are operating upon him.

1. Ibid., p. 165.

2. Ibid., p. xv.

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A record of constant changes of address with a trend towards the Downtown area may indicate a great deal more than simple financial difficulties. It may be indicative of the onset of mental illness. Anderson, Jala. The Negro. Chicago, Ill.: University of Chicago Press, 1933.

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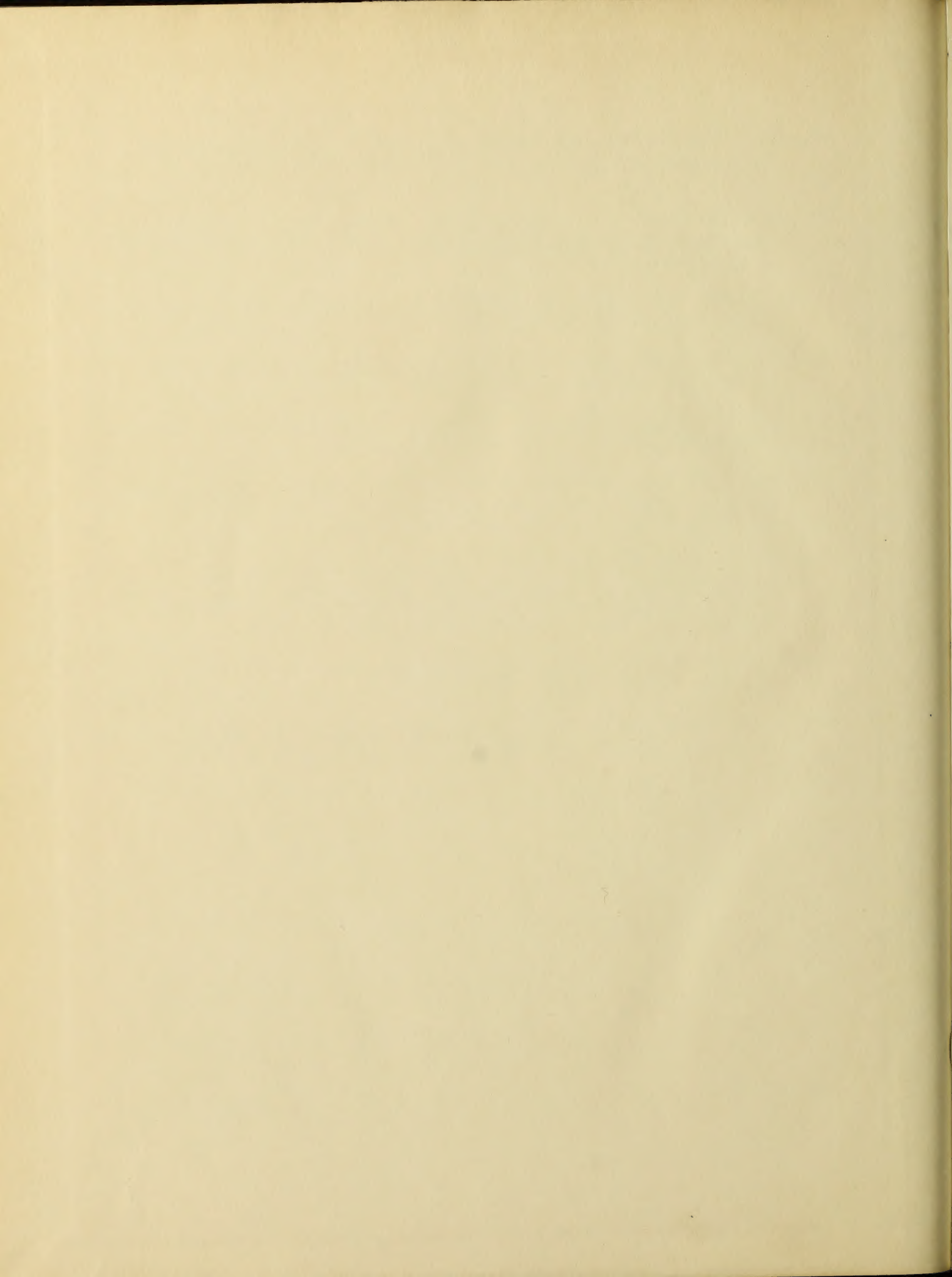
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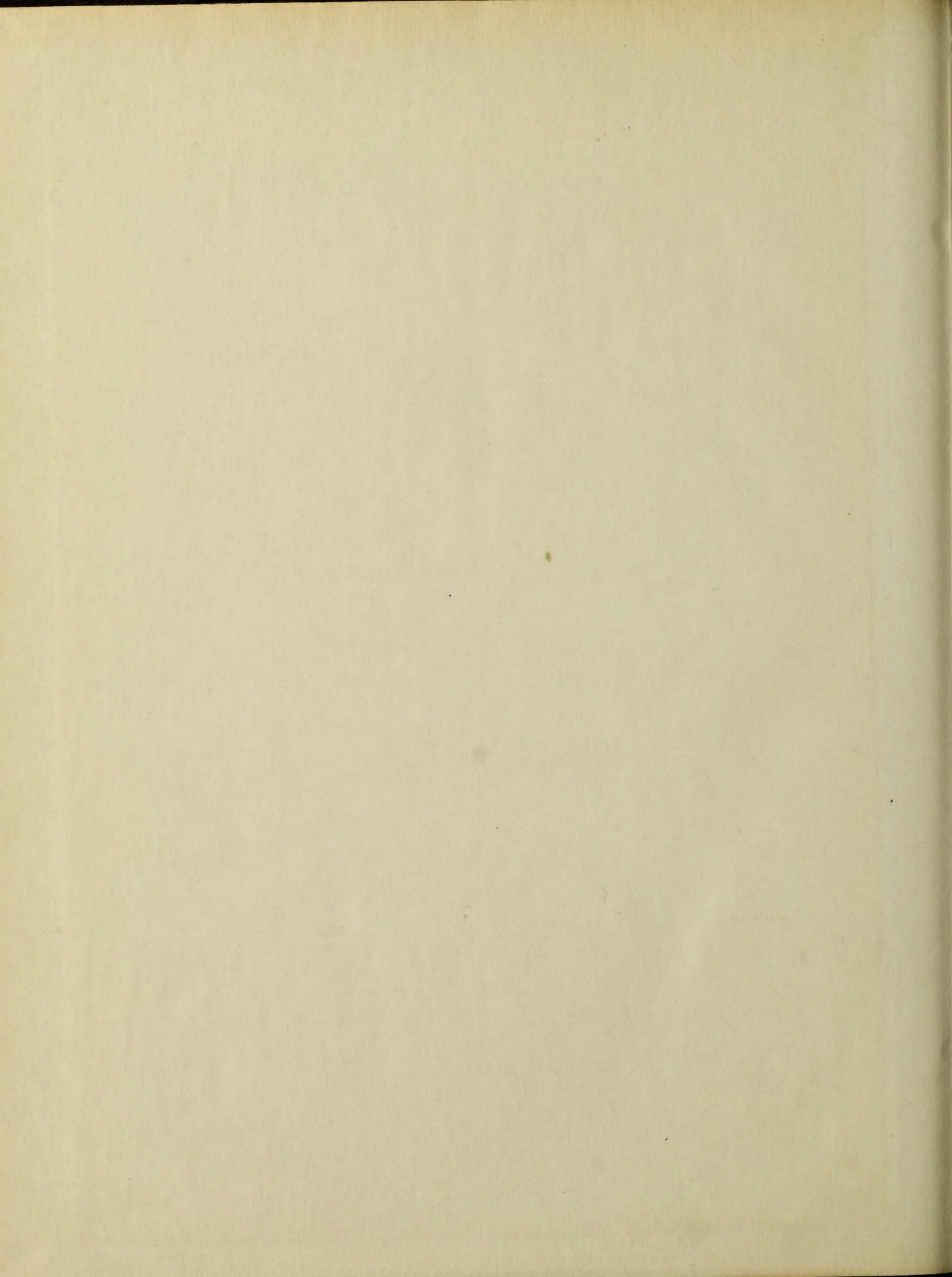
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